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FINAL REPORT
ESTES VALLEY

49-008970

A. Durand Jones, Superintendent   May 1, 1998

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INTRODUCTION

The mission statement for Rocky Mountain National Park dates back to 1915, when the park was established by Congress:

> *". . . said area is dedicated and set apart as a public park for the benefit and enjoyment of people of the United States. . .with regulations being primarily aimed at the freest use of the said park for recreational purposes by the public and for the preservation of the natural conditions and scenic beauties thereof."* (38 Stat. 798).

Embodied in this mission is the protection of natural conditions, scenic beauty, and the experience of park visitors.

Because Rocky Mountain National Park is not an island, and is not a self-contained ecosystem, many important park resources and values are inextricably linked with surrounding privately owned lands. Protecting resources that cross property boundaries requires collaboration between the park and its neighbors.

The importance of maintaining vital relationships between the park and its neighbors was recognized at a conference held in Estes Park, Colorado, in 1993. The *Gateways to the 21st Century Conference* brought together 130 people from the counties and towns around the park to discuss the future of the park and surrounding lands. The top priority for action identified at the conference was:

> *"Land management agencies and others should identify those lands that are critical to: (a) the long-term health of the bioregion; or (b) to visitor experience (i.e., vistas, access, etc.); or (c) to the cultural and social fabric of the area. Landowners, communities and counties should work together to establish development standards, guidelines, and/or other strategies to protect critical lands or cultural resources."*

In 1989, Representative Hank Brown (R-CO) and Senator Tim Wirth (D-CO) introduced identical bills in the House (H.R.1606) and Senate (S.737) to amend the boundary of Rocky Mountain National Park. These bills authorized the Secretary of the Interior to acquire lands near Lily Lake, on the eastern boundary of the park. The act was signed into law on November 29, 1989, (P.L. 101-192).

The House Committee on Interior and Insular Affairs submitted a report to the House of Representatives to accompany H.R.1606. The report read in part:

> *"The Committee notes that this is the third time boundary adjustments have been authorized since completion of a boundary study a decade ago. In light of the accelerated development and corresponding changes in use and management in the area, the Committee believes that it would be appropriate and desirable for the National Park Service, in cooperation with the U.S. Forest Service, to undertake a comprehensive boundary study for Rocky Mountain National Park and make such recommendations as may be necessary to further the efficient management of the park and protect and preserve the natural, cultural, historic, scenic and recreational resources on adjacent lands."*[1]

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[1] 101st Congress, 1st Session (1989), House of Representatives Report 101-252

RELATED LANDS EVALUATION

In October of 1995, the park began work on its Related Lands Evaluation, a project designed to address the top priority for action that was identified at the *Gateways to the 21st Century Conference*, and to fulfill the direction of Congress to undertake a comprehensive boundary study. At that time, the park prepared a Task Directive that described the purpose for undertaking the Related Lands Evaluation.[2] The document identified the six topics that must be addressed in order for the park to fulfill its mission. The six topics are:

A. Protect the experience of park visitors
   1. Protect scenic vistas.
   2. Protect the night sky.
   3. Maintain access to the park where existing trails cross private land.

B. Preserve Natural Conditions
   4. Conserve wildlife habitat.
   5. Mitigate wildfire hazards.
   6. Manage noxious weeds.

The Task Directive included a specific work program to address each of the six topics. The document was widely distributed, and presentations were made to local staffs of the park's Congressional delegation, county commissioners, other government officials, and numerous civic organizations. Concerns were raised that the Federal Government should not be meddling in private property rights. Park staff is keenly aware of this concern, and recognizes that this project will not be successful if park neighbors believe that private property rights are being compromised. As a result, the primary focus of the Related Lands Evaluation has been to protect park resources and values through collaboration with park neighbors rather than through land acquisition by the Federal Government.

There are several efforts underway to plan for the future of the Estes Valley. Among these efforts are the establishment of a new Estes Valley Planning Commission, the preparation of a new land use code for the Estes Valley, and the recent completion of the Estes Valley Comprehensive Plan. The Related Lands Evaluation will provide valuable and timely information to these other initiatives about what is important to the future health and well-being of Rocky Mountain National Park. A growing Estes Valley population and resulting new construction have created a sense of urgency that the resources and values identified in the Related Lands Evaluation must be protected soon, or an important opportunity will have been lost.

PUBLIC INVOLVEMENT

In April of 1996, all property owners within 1/2 mile of the east boundary of Rocky Mountain National Park were invited to participate in the Related Lands Evaluation. Almost 1,900 letters of invitation were mailed. A list containing over 500 names was developed based upon the response to the initial mailing. Those on the mailing list were invited to participate in the formation of six taskforces - one for each of the six topic areas. The initial taskforce meetings for scenic vistas, noxious weeds, night lighting and trail access were held in June, 1996. The initial taskforce meeting on wildlife habitat was held in September, 1996. The wildfire hazard mitigation taskforce was delayed for several months while new data was assembled to produce a more accurate wildland fire potential map for the Estes Valley. The wildfire hazard mitigation taskforce first met in May, 1997. Appendix A contains a list of the taskforce participants.

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[2] "Task Directive, Related Lands Evaluation, Rocky Mountain National Park." October 1995.
This document may be obtained by writing to: Superintendent, Rocky Mountain National Park, Estes Park, CO 80517.

The function of each taskforce was to provide guidance on research and data collection for each topic, and to review and comment on the maps and other materials as they were developed. Specific findings related to each topic are covered later in this document.

A Draft Related Lands Evaluation Final Report was published on June 27, 1997. The report was distributed to the entire mailing list plus numerous other individuals and organizations for review and comment. The deadline for comments was August 22, 1997. There were 26 responses to the draft report. This Final Report for the Estes Valley that you have before you has been amended to include all of the relevant comments that were received. A summary of all of the comments and a response from the staff at Rocky Mountain National Park is included in Appendix B.

All of the resource maps produced for the Related Lands Evaluation (refer to the next section) have been combined with the Larimer County Assessor's parcel maps. It is therefore possible to identify and work with all of the landowers who are affected by a particular Related Lands Evaluation topic. For example, all of the landowners who are located in areas with a high wildland fire potential. Future public involvement efforts will concentrate on providing information to landowners who are directly affected by one or more of the Related Lands Evaluation topics. Public involvement will also include area homeowner associations, civic groups, and other organizations. For some critical elements of the Related Lands Evaluation, all landowners in the Estes Valley will be provided with information about how they can protect important resources.

RESOURCE MAPPING

A Global Positioning System (GPS) and a Geographical Information System (GIS) were used extensively throughout this project. GPS provides a means to collect data in the field about the spatial location of natural and manmade features. GPS enabled park staff to collect accurate information about the location of publicly used trails that cross private lands to access the park. It was also used to collect accurate information on the location of noxious weed infestations. Once the information was collected using the GPS unit, it was stored and mapped using GIS.

GIS is a computer system that handles data storage, retrieval, and display of spatial information. Data is typically stored as "layers" of information. For example, roads, streams, topography and existing vegetation might all be stored as separate layers of information. These layers can then be retrieved separately or in any combination to produce useful maps.

During 1996 and early 1997, a significant amount of time was devoted to collecting information and producing GIS maps for five of the six Related Lands Evaluation topics.

GIS data and maps are currently available for lands within the Estes Valley for the following topics:

- Scenic vistas.
- Wildlife habitat.
- Wildfire potential.
- Water courses and wetlands.
- Trails.

It was not necessary to map existing night lighting for this project.

RESULTS OF THE RELATED LANDS EVALUATION

The following sections contain the specific findings of the Related Lands Evaluation. The findings for each topic are described in detail, and each topic contains the following sub-sections:

- Significance - The significance of the topic to the mission of Rocky Mountain National Park, and how it relates to (a) protecting the experience of park visitors, or (b) preserving natural conditions and scenery.
- Location - The extent of the resource. For some resources, like trail access, only a limited number of privately owned lands are involved. For other resources, like wildlife habitat, large areas are involved.
- Mapping procedure - The decisions that were made as data was collected, mapped, and reviewed.
- Current threats - Existing conditions or trends and the specific ways in which they impact park values.
- Desired outcomes - Specific changes that must take place in order to protect park resources and values. Action items to achieve the desired outcomes are also listed. The action items have several important characteristics. They are: (1) Measurable, (2) Time limited, (3) Realistic, and (4) Relevant to the park and its gateway communities.
- Collaboration required - Specific groups or organizations that need to be involved if the desired outcomes are to be achieved. A table identifying Related Lands Evaluation topics and potential collaborators is included in Appendix D.

Scenic Vistas

A. Significance

The opportunity to experience dramatic mountain scenery is the single greatest attraction that brings visitors to Rocky Mountain National Park. Scenery is the drawing card that brings millions of visitors to the park each year, and it is largely responsible for the economic success of its gateway communities.

In a recent survey of park visitors, 91.7 percent of the respondents indicated that natural scenery is extremely important to their visit. This was the highest response for all of the park values listed. Some 81.1 percent of the respondents indicated that undeveloped vistas were extremely important to their visit[3]. Protection of important scenic vistas is vital to the future of Rocky Mountain National Park and its gateway communities. Erosion of scenic quality will very likely result in diminished visitor experiences and potential loss of revenues from tourism.

B. Location

Scenic vistas abound in Rocky Mountain National Park and in the adjacent Estes Valley. There are numerous vantage points throughout the area, both inside and outside the park, from which one can see dramatic scenery. For the purposes of the Related Lands Evaluation, only vantage points within the national park were studied, and only privately owned lands in the Estes Valley that can be seen from specific vantage points within the park were included in the study.

C. Mapping Procedure

The scenic vistas task force identified six critical vantage points within Rocky Mountain National Park. These six points do not encompass all of the important vantage points within the park, but they are believed to be the most important. The six points are:

- The pullout just above Baker's Curve on Trail Ridge Road.
- Many Parks Curve on Trail Ridge Road.
- Rainbow Curve on Trail Ridge Road.
- Deer Mountain summit.
- Twin Sisters summit.
- Longs Peak summit.

The three locations on Trail Ridge Road are scenic overlooks. They all provide parking spaces and walkways for visitors. All three overlooks are visited by tens of thousands of visitors each year.

The three mountain peaks are destinations for hikers in Rocky Mountain National Park. It is estimated that 10,000 people reach the summit of Longs Peak each year. The number of people who reach the summits of Twin Sisters and Deer Mountain is unknown, but it is likely that thousands of people visit these vantage points each year.

The scenic vistas task force agreed on two primary criteria for determining visual sensitivity:

- Distance from a vantage point - lands in close proximity to a vantage point are more visually sensitive than lands located farther away. Using GIS, a series of eight one-mile zones were developed around each of the six vantage points. Lands within one-mile of a vantage point received a value of eight, while lands located eight miles away received a value of one.
- Number of vantage points that visually access an area - lands that can be seen from a number of vantage points are more visually sensitive than lands that can only be seen from one vantage point. Using GIS, a viewshed analysis was done

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[3] Valdez, Sandy D., "Rocky Mountain National Park Visitor Use Survey: 1994-1995." National Park Service, Socio-Economic Studies Division, Denver, Colorado.

from each vantage point using elevation data. The viewshed analysis determined which private lands could actually be seen from the vantage points, and how many times each parcel could be seen.

The GIS information on distance and the GIS viewshed analysis for all vantage points were added together to produce a composite map showing visual sensitivity. When added together, values were in the range of 1 to 26. High values indicate a location that is in close proximity to a vantage point and/or can be seen from multiple vantage points. Low values indicate a location that is far from the vantage points and/or is seen from only a few vantage points. The numerical values were divided into five categories for mapping clarity. The final visual sensitivity analysis for all six vantage points can be seen in Map 1, Appendix C.

D. Current Threats

Development of roads, homes and other structures on private lands near the park have the potential to adversely impact scenic vistas. Some examples of the potential impacts from new development include:

- Scars on hillsides resulting from road construction or grading that is done to create a level homesite.
- Large clearings in forested areas to construct roads or homes.
- Location of buildings on ridgelines where they are highly visible.
- Architectural style, building mass and/or height that is out of character or scale with the natural surroundings.
- Use of exterior building materials and/or colors that are incongruous with the surroundings.
- Use of siding, roofing or other exterior materials that reflect sunlight and create glare.
- Choice of plants and landscape design that is out of character with the natural surroundings.

E. Desired Outcomes

End Result: New development on properties with high and moderately-high visual sensitivity as shown on Map 1, Appendix C, will not mar important scenic vistas.

Action Items:

1. By September 30, 1998, the following groups will be informed about the importance of scenic vistas to the park and specific ways that vistas can be protected:
   a. Professionals who design subdivisions, buildings, roads and landscaping in the Estes Valley.
   b. Owners of undeveloped properties in areas with high and moderately-high visual sensitivity as shown on Map 1, Appendix C.
   c. Local officials who are responsible for reviewing and/or approving subdivision plats, site designs and building permits.
   d. Real Estate agents and brokers.
   e. Homeowner Associations with site and architectural review authority.

2. By September 30, 1998, local officials will have been contacted about the possibility of adopting site design, architecture, and landscaping standards and/or guidelines for areas with high and moderately-high visual sensitivity as shown on Map 1, Appendix C.

F. Collaboration Required
Please refer to Appendix D.

Wildlife Habitat

A. Significance
In a recent survey of park visitors, 83.1 percent indicated that wildlife was an extremely important part of their visit.[4] In particular, the elk rutting season in the fall attracts thousands of visitors to Estes Park and Rocky Mountain National Park. As a drawing card for Estes Park, wildlife viewing ranks very high on the list and plays a significant role in the economic success of the park's gateway communities.

Protection of critical wildlife habitat is vital to the future of Rocky Mountain National Park and its gateway communities. Maintaining healthy wildlife populations depends on habitat that encompasses both public and privately owned lands. Deer, elk, bighorn sheep and other species don't recognize property boundaries!

Loss of wildlife habitat will very likely result in reduced wildlife populations for some species, which will affect natural conditions in the park. To be true to its mission from Congress to protect natural conditions, park staff will continue to work for the protection of critical wildlife habitat both inside and outside the park boundary.

From an economic perspective, reduced revenues from tourism could also occur if healthy wildlife populations are diminished due to habitat loss or reduction in habitat quality.

B. Location
The Related Lands Evaluation concentrated on wildlife habitat for the three species that garner the most attention from park visitors, and for which the most data is available, namely bighorn sheep, elk and mule deer. The habitat for these three species is extensive throughout the Estes Valley. Also included in the inventory were riparian (streamside) areas throughout the Estes Valley.

Riparian areas and wetlands comprise one of the Earth's most productive natural ecosystems. They have a remarkable ability to shelter fish and wildlife, cleanse polluted and silt-laden runoff, protect against floods, and contribute to groundwater recharge.[5] Because of their importance in maintaining healthy ecosystems, and their connection to the park (where the headwaters of most streams originate) wetlands and riparian corridors were included in the Related Lands Evaluation.

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[4] Valdez, Sandy D., "Rocky Mountain National Park Visitor Use Survey: 1994-1995." National Park Service, Socio-Economic Studies Division, Denver, Colorado.

C. Mapping Procedure

Most of the data on bighorn sheep, elk and mule deer was obtained from the Colorado Division of Wildlife. Primary data sources were the Wildlife Resource Inventory System (WRIS) and the personal knowledge of the District Wildlife Manager.

Wetland data was derived from the National Wetlands Inventory of the U.S. Fish and Wildlife Service and vegetation mapping completed by the Colorado State Forest Service in 1997 using aerial photography from the early 1980s. Riparian corridors were mapped using a 50-foot buffer on each side of all water courses in the Estes Valley that have been identified on U.S. Geological Survey (USGS) 1:24,000 scale quadrangles.

The preliminary wildlife habitat and riparian area maps were reviewed by the wildlife habitat taskforce. Following the taskforce review, the maps were amended to include some minor additions. Wildlife habitat, migration routes and riparian areas are shown on Maps 2, 3, and 4 in Appendix C.

D. Current Threats

Habitat fragmentation caused by the development of new homes, roads, fences and other manmade intrusions poses the single greatest threat to wildlife populations. The consequences of habitat fragmentation are numerous:

- Species that depend on a minimum size of habitat will suffer when left with only isolated patches of woods or ground cover.
- Larger predatory species, like the black bear, that require an extensive range for breeding and food gathering are quickly lost when the links within their range are severed.
- Alien or common species begin to dominate the local environment. Common species include those that have adapted well to human civilization, including squirrels and raccoons. Their dominance tends to diminish the overall biodiversity within the environment.
- The severed links in migration corridors increase the inbreeding within local wildlife species, weakening them and increasing the likelihood of their decline over time.In the Estes Valley, hunting opportunities are dwindling as former open areas where hunting was allowed are developed. Hunting is now the primary means for managing animal populations since predators (such as the mountain lion) are few in number.

Feeding or intentionally attracting wildlife is also a major problem in Rocky Mountain National Park and on adjacent lands. Feeding concentrates animals unnaturally, and diseased animals can more easily infect others. Feeding can also attract other unwanted guests, such as black bears and mountain lions. The Colorado Division of Wildlife has had to destroy a number of bears and mountain lions that became nuisances because of food that was set out for other animals.

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[5] Urban Land Institute, "Wetlands," ULISources, Vol. 1, No. 1, Spring 1995. ULI-The Urban Land Institute, Washington, D.C.

E. Desired Outcomes

End Results: By using conservation design techniques, new developments on properties that currently are over five acres in size will protect wildlife habitat areas, migration routes, wetlands and riparian corridors as shown on Maps 2, 3, and 4 in Appendix C.

Landowners in the Estes Valley will be informed about habitat conservation, wetlands protection, the importance of not feeding wildlife and how to co-exist with numerous wildlife species.

Action Items:

1. By September 30, 1998, the following groups will be informed about the importance of wildlife habitat, wetlands and riparian areas, and will be informed about the principles of conservation design for subdivisions[6].
    a. Professionals who are involved in subdivision and site design in the Estes Valley.
    b. Owners of properties over five acres in size that are located in areas with important wildlife habitat, migration routes, wetlands and riparian corridors as shown on Maps 2, 3, and 4 in Appendix C.
    c. Local officials who are responsible for reviewing and/or approving subdivision plats and site designs.
    d. Real Estate agents and brokers.
    e. Homeowner Associations with site plan review authority.

2. By September 30, 1998, local officials will be contacted about the possibility of adopting conservation design standards and/or guidelines for properties that are over five acres in size that are located in areas with important wildlife habitat, migration routes, wetlands and riparian corridors as shown on Maps 2, 3, and 4 in Appendix C.

3. By September 30, 1998, all landowners in the Estes Valley will be informed about the importance of habitat and wetlands conservation, the importance of not feeding wildlife, and how to coexist with the wildlife species in this area.

F. Collaboration Required

Please refer to Appendix D.

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[6] Arendt, Randall, "Conservation Design for Subdivisions." Island Press, Washington, D.C. 1996.

Wildfire Hazards

A. Significance

For the first half of this century, the American public was taught that forest fires were bad. As a result, wildland fires that were started either by man-made or natural causes have been vigorously suppressed. In recent years, foresters, ecologists and others have discovered that fire plays a valuable role in helping maintain healthy forests.

Due to vigorous fire suppression, many forests, including those in and around Rocky Mountain National Park, are ripe for a major wildland fire. Without the benefit of periodic, smaller fires, forest fuels (such as dead and downed timber) have increased to the point where they could fuel a major fire. In addition, more homes and cabins are being built in this unhealthy forest environment, increasing the potential for major losses in the event of a fire.

Like all natural processes, wildfire does not recognize political boundaries. A fire that begins inside Rocky Mountain National Park could easily cross the park boundary and destroy private property. Conversely, a fire could just as easily begin on private land and move into the park. Private and public property and values are at risk. A joint effort is needed between public land managers and private landowners to reduce this risk.

Three important steps are necessary:

- Identify areas where the potential for a wildland fire is the greatest.
- Inform landowners in high risk areas about wildland fire and the steps they can take to reduce their risks.
- Complete the work that is needed to reduce the wildland fire hazard.

B. Location

Most of the Estes Valley is susceptible to wildland fires, whether it involves forest lands or grasslands. The wildland fire potential was mapped for the entire Estes Valley.

C. Mapping Procedure

To identify areas that are at risk from a wildland fire, computer modeling is an extremely valuable tool. Weather, terrain, vegetation type and fuels (dead and downed timber for example) are critical pieces of information for determining fire behavior.

In 1997, the Colorado State Forest Service completed a project to map the location and types of vegetation in Larimer County. Aerial photography at a 1:24,000 scale was used to complete this task.

A computer model was developed to determine the wildland fire potential. The model incorporates the following information:

- The type of vegetation (certain types of vegetation are more susceptible to fire).
- The slope of the land (areas with steep slopes are at greater risk).
- The orientation of the slope (south facing slopes are at greater risk).

The end result is a wildland fire potential map that covers all of the Estes Valley (refer to Map 5, Appendix C).

D. Current Threats

Numerous lots that are available for future residential development are located in areas that have a high wildland fire potential. Likewise, many existing homes are also at risk from a wildland fire. Many situations contribute to this risk. Some of the more obvious ones are:

- Homes built on steep, south facing slopes.
- Homes built in gullies and narrow valleys.
- Poor access for emergency vehicles.
- Lack of adequate street signs or visible house numbers.
- Building and roofing materials that are highly flammable.
- Vegetation and debris around homes that provide continuous fuels into surrounding forested land.
- Firewood and/or propane tanks located too close to the house.
- Lack of an adequate water supply to fight a fire.

Many homeowners are not aware of the serious threat of wildland fire and the conditions around their homes and properties that contribute to the wildfire hazard. Consequently, many homeowners have not taken appropriate steps to reduce their risks. As more homes are built in wildfire prone areas, the specter of significant property damage and even loss of life from a wildfire is increasing.

Because of the serious impacts fires would have on privately owned lands bordering the park, fire management practices in the park have been designed to help reduce this risk. For example, tree thinning and fuels reduction has been initiated, and will continue, inside the park in areas that are wildfire prone. Wildfire hazard mitigation will need to be done on both sides of the park boundary.

E. Desired Outcomes

End Result: Wildfire hazards will be mitigated to the fullest extent possible on all properties that are located in areas with high wildland fire potential as shown on Map 5, Appendix C.

Action Items:

1. By September 30, 1998, local officials will have been contacted about the possibility of adopting wildfire mitigation requirements for all new developments located in areas with high wildland fire potential as shown in Map 5, Appendix C.

2. By September 30, 1998, the following groups will be informed about the importance of wildfire hazard mitigation:

a. Professionals who design subdivisions, buildings, roads and landscaping in the Estes Valley.
b. Building contractors in the Estes Valley.
c. Owners of properties in areas with high wildland fire potential as shown in Map 5, Appendix C.
d. Local officials who are responsible for reviewing and/or approving subdivision plats, site designs and building permits.
e. Real Estate agents and brokers.
f. Homeowner Associations with site and architectural review authority.

F. Collaboration Required
Please refer to Appendix D.

Noxious Weeds

A. Significance
Rocky Mountain National Park is recognized for its world-class biological diversity and value to research. Preservation of native plants and animals is critical to the health of the natural environment within the park and on neighboring lands. One threat to natural conditions and biological diversity is the invasion and spread of noxious weeds, which is perhaps the most serious, yet largely unrecognized, problem the area presently faces.

Noxious weeds are alien (non-native) plants that are aggressive invaders. By crowding out native plants, they have the potential to eliminate large areas of natural habitat. They often provide no food value and can be poisonous to wildlife and livestock. Noxious weeds pose a serious threat to scenic and aesthetic values, recreational opportunities, and agricultural productivity, and account for large economic losses throughout the American West.

Vast areas of agricultural land and wildlands are being silently taken over by these leafy invaders. In the American West, the acreage of public range land and wildlands infested by weeds doubles every six years. Of the 1,300 native species of plants in Colorado, 130 (10 percent) have already been displaced by non-native weeds.

Rocky Mountain National Park is currently managing 13 noxious weeds that have been found within the park: Bull thistle, canada thistle, musk thistle, diffuse knapweed, spotted knapweed, dalmatian toadflax, yellow toadflax, leafy spurge, perennial pepperweed, field bindweed, common burdock, houndstongue, and woolly mullein.

The Estes Valley is one of six areas in Colorado that have been selected by the Colorado Noxious Weed Management Team to demonstrate the effectiveness of a coordinated approach to weed management. The Estes Valley was chosen because of the level of local support, the partnerships that have been established among public and private landowners, and our potential for success.

B. Location

Noxious weeds have been found in Rocky Mountain National Park and on public and private lands in the Estes Valley. The total extent of the problem in the Estes Valley is not known. Based upon current information, it is presumed that infestations of noxious weeds are widespread, but in manageable numbers **if action is taken now**. If not addressed soon, existing noxious weed infestations will spread at an exponential rate and will reach unmanageable proportions in the near future.

C. Mapping Procedure

During the summer of 1996, known locations of noxious weed infestations within the borders of the park were mapped. Additional mapping was done for public lands in the Estes Valley. Very little mapping has been done on private property in the Estes Valley, and will not be done without the express consent of landowners.

A number of local partners were successful in securing funding for weed management activities in the Estes Valley for the summer of 1998. The State of Colorado, the National Fish and Wildlife Foundation and several homeowner associations and other partners contributed over $40,000 toward this effort. The funds will be used to hire a licensed contractor who will map the location of noxious weeds using GPS and eradicate them.

D. Current Threats

Noxious weeds establish themselves in soil that has been disturbed by construction, travel, recreation use, and by other means. Once established, wildlife, livestock, people, machinery, wind and water can transport the seeds to new sites. Humans unknowingly contribute to the spread of noxious weeds by driving and hikingthrough weed infested areas. We also spread noxious weeds by using weed infested hay for livestock, gravel for driveways, and seeds for landscaping. Noxious weeds can also be spread by gathering weeds for decorations, and through construction and other activities that destroy native vegetation and therefore provide a seedbed for weeds. The following threats are the most significant:

- The spread of noxious weeds will have a direct impact on biological diversity, including wildlife. For example, 20 percent of the plant population in Moraine Park, inside the national park, is composed of exotic species. Some of these exotics are not desirable forage for wildlife.
- Displacement of native plant species that elk, mule deer, bighorn sheep and other animals and birds depend upon for food and forage could force the animals to look elsewhere. This would have an economic impact on the gateway community of Estes Park since wildlife viewing and bird watching is a major tourist draw for the community.
- Over three million visitors a year pass through the park. Visitors inadvertently bring seed from exotic species into the park, and can also spread seed to areas outside the park. The park has documented several instances where noxious

weeds have become established in the park directly by the actions of park visitors. Dispersal of noxious weeds from the park by visitors could have a regional impact on the Estes Valley and beyond.

- Noxious weeds reduce the aesthetic quality of landscapes. Some noxious weeds exude chemicals that can kill surrounding native plants and ultimately create a monoculture. Wildflowers are a major attraction for park visitors. Attractive native species of wildflowers can be eliminated by noxious weeds whose flowers are not aesthetically pleasing.
- Loss of forb and grass understory increases the potential for soil erosion.

Unless the spread of noxious weeds can be managed, Rocky Mountain National Park and neighboring lands face a serious problem that has the potential to negatively impact natural conditions (including wildlife), the experience of park visitors, and ultimately the local economy.

E. Desired Outcomes

End Result: The spread of noxious weeds will be stopped and existing infestations will be controlled on public and private lands throughout the Estes Valley.

Action Items:

1. By March 31, 1999, all landowners, developers, contractors and landscaping professionals and suppliers in the Estes Valley will be informed about the threat of noxious weeds, how they can be identified, managed and monitored. The information campaign will include the following approaches:
    a. Preparation of an informative video that will be available to local civic groups, homeowner's associations, the Estes Park Public Library, and the local access cable TV station.
    b. Preparation and dissemination of a color brochure for landowners, homeowners and renters.
    c. Preparation and dissemination of a brochure for contractors, developers and landscaping professionals and suppliers.

F. Collaboration Required
Please refer to Appendix D

Night Lighting

A. Significance
In a recent survey of park visitors, 18.3 percent of respondents indicated that they spent one or more nights in Rocky Mountain National Park. The average length of stay was about three nights. The number of overnight stays in the park each year in campgrounds and backcountry campsites is estimated at almost 232,000. In the same

survey, 61.7 percent of park visitors indicated that the night sky was extremely important to their visit.[7]

Many park visitors from urban areas are unable to regularly experience the full magnitude and expanse of the night sky. In urban areas, views of the sky are often obstructed by buildings and light pollution. Each new structure, and each new parking lot and street is accompanied by additional lighting. Poor lighting choices around our homes and in our towns and cities diminish our views of the moon, stars, and planets.

The ability to view the grandeur of the night sky from within the park without excessive intrusion from light pollution is an important visitor experience. Protecting the night sky can be accomplished by avoiding new light pollution problems and correcting past lighting mistakes.

B. Location

Exterior lighting exists in many forms, both inside and outside the park. Night lighting is so much a part of our everyday lives that virtually every building is equipped with it. Street lighting is also commonplace in the Estes Valley. Concentrations of exterior lights can be seen in the more urban center of Estes Park and at major facilities such as the Park Headquarters area and the Estes Park Center YMCA of the Rockies.

C. Mapping Procedure

The greatest number of nighttime visitors in Rocky Mountain National Park are staying in developed campgrounds. The number of overnight stays in the park each year in developed campgrounds is estimated at almost 171,000. For this reason, the night lighting task force visited all of the developed campgrounds on the east side of the park to assess the impact of night lighting originating outside the park boundary. None of the four campgrounds (Longs Peak, Glacier Basin, Moraine Park and Aspenglen) were seriously impacted by night lighting. In fact, the most obtrusive night lighting that could be observed at the Moraine Park Campground was a pole mounted light at the campground amphitheater in the park! The task force determined that there was little to be gained by mapping the few parcels of land with obvious exterior lights that could be seen from the campgrounds.

D. Current Threats

Rocky Mountain National Park has some serious lighting problems within its own borders. There are a number of exterior lights in the park, particularly in the maintenance yard and residential area near park headquarters, that are obtrusive. The park will be installing new lights in order to set a good example for others to follow. Preliminary plans have been prepared to replace many outdated light fixtures in the maintenance yard and in the housing area located near park headquarters. The old light fixtures will be photographed before they are replaced, and the new fixtures will also be photographed when the work is completed. These before and after photographs will be used to inform private landowners about making good lighting choices.

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[7] Valdez, Sandy D., "Rocky Mountain National Park Visitor Use Survey: 1994-1995." National Park Service, Socio-Economic Studies Division, Denver, Colorado.

The light fixtures in the park headquarters parking lots are also a poor example of exterior lighting. As the park headquarters building is remodeled over the course of the next two years, these lights will be replaced. Before and after photographs also will be used to document the change.

Examples of inappropriate exterior lighting are also evident on private properties around the park. These include:

- More lights than are needed to provide good security or safety.
- Lighting that is brighter (more wattage) than is needed for good security or safety.
- Unshielded lights that illuminate the sky or allow light to spill beyond the area that needs to be lighted.
- Misdirected lighting that does not provide light where it is needed.
- Exterior lights that remain on even when they are not needed.
- Lights that illuminate with unnatural colors. For example, mercury vapor lamps appear bluish while high pressure sodium lamps appear orange.

The cumulative impact of repeated lighting mistakes on park visitors is an impaired ability to view the nighttime sky in all its splendor. Lights that illuminate the sky provide no useful lighting, waste significant amounts of energy, and threaten astronomical research. In the United States, the cost of this misdirected light can be conservatively estimated to be more than $1.5 billion[8].

E. Desired Outcomes

End Result: New and replacement exterior light fixtures in Rocky Mountain National Park and in the Estes Valley will be selected and installed to provide adequate light where and when it is really needed, while protecting the night sky and neighborhing properties by minimizing light pollution and light trespass.

Action Items:

1. By October 2003, Rocky Mountain National Park will replace outdated light fixtures in the maintenance yard and in the housing area near park headquarters.

2. By September 30, 1998, the following groups will be informed about the threat of excessive exterior lighting and the principles of good night lighting:
   a. Professionals who design subdivisions, buildings, and streets in the Estes Valley.
   b. Building contractors in the Estes Valley.
   c. All landowners in the Estes Valley.
   d. Real Estate agents and brokers.
   e. Lighting suppliers in Estes Park.

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[8] International Dark-Sky Association, Inc., "Help Us Save The Stars." Tucson, Arizona.

f. Local officials who are responsible for reviewing and/or approving subdivision plats, site designs, building permits, and street lighting.
g. Homeowner Associations.

The information campaign will include the following approaches:
a. Preparation of an informative video that will be available to local civic groups, the Estes Park Public Library, and the local access cable TV station.
b. Preparation and dissemination of a brochure for homeowners.
c. Preparation and dissemination of a brochure for designers, contractors and developers.

3. By September 30, 1998, local officials will have been contacted about the possibility of adopting exterior lighting regulations for the Estes Valley. Areas to be addressed include new structures, subdivisions and other exterior lighting applications, as well as remodels and additions to existing structures or other uses that use exterior lights.

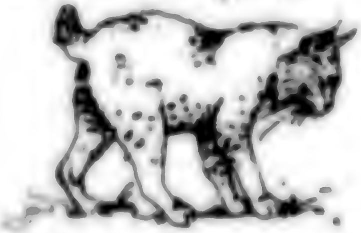
F. Collaboration Required
Please refer to Appendix D.

Trail Access

A. Significance
It is estimated that over 1/2-million visitors (about one-sixth of all park visitors) use trails within the park. In the Estes Valley there are four major trails that cross private properties to access the park. Preserving these access points is important to the thousands of park visitors who use these trails each year. Loss of access, even if temporary, would have a significant negative impact on visitor experience. On the other hand, avoiding negative impacts to private property and maintaining a positive relationship with the affected landowners is very important.

B. Location
The four trails in the Estes Valley that cross private properties to access the park are:

- Gem Lake.
- Deer Ridge.
- Aspen Brook.
- Baldpate.



C. Mapping procedure
During the summer of 1996, GPS was used to accurately locate all four of the trails in the Estes Valley that cross private lands to access the park. Maps were then prepared. With accurate information on the location of the trails, the property owners who were involved could be identified using parcel data provided by the Larimer County Assessors and the Town of Estes Park. Existing trails that cross private lands to access the park are shown on Map 6, Appendix C.

D. Current Threats

Very few conflicts over public use of the aforementioned trails currently exist. Most property owners have not discouraged public use of trails that cross their lands. As park visitation and use of trails increase, the potential for conflicts between hikers and private property owners increases. Potential problems for private landowners include trespassing, property damage (from foot traffic and storm water runoff), conflicts with domestic livestock, and vandalism. To ensure that trails across private property remain open to the public, hikers and backpackers must adhere to a "code of ethics" that respects private property.

There are numerous retreats, camps and lodges on the borders of the National Park. Examples include the YMCA of the Rockies, the Aspen Lodge, High Peak Camp, and the St. Malo Retreat Center. These facilities are near the park because of the hiking, fishing, horseback riding and other recreational opportunities that are available in the park. With a significant number of people concentrated on the borders of the park at these facilities (the YMCA alone accommodates over 150,000 overnight guests annually), the potential exists for adverse impacts to park resources. For example, uncontrolled access to the park from a retreat or lodge can lead to the creation of numerous social trails. These trails have the potential to fragment wildlife habitat, they can become corridors for the inadvertent introduction of noxious weeds, and they can be hard to maintain, thereby leading to erosion problems.

E. Desired Outcomes

End Result:
1. Essential trails that provide access to the park via private lands will remain open for public use. Essential trails are those where no other reasonable alternative for access currently exists.
2. The public will be informed about trail ethics, particularly on trails that cross private lands into the park.
3. Access to the park from camps, lodges, retreats and other facilities or already designated and maintained trails on the borders of the park will be managed in a cooperative manner.

Action Items:

1. By September 30, 1998, the park will assess the extent of private landowner concerns about public use of trails that cross, or border their lands. If significant concerns do exist, it will develop solutions in collaboration with landowners and trail advocacy groups, such as the Shining Mountains Group of the Colorado Mountain Club.

2. By September 30, 1998, the park will assess the extent of trail related impacts to the park from nearby lodges or retreats. If significant impacts are evident, it will develop solutions to mitigate the impacts in collaboration with lodge and retreat directors.

F. Collaboration Required

Please refer to Appendix D

PROTECTING IMPORTANT RESOURCES

The Related Lands Evaluation has identified resources on privately owned lands that are important to Rocky Mountain National Park. In addition to the specific action items mentioned in the preceding sections, park management has identified several broader objectives that also would help protect important resources while respecting private property rights:

Gateways Conference II

In collaboration with other partners, the park proposes a follow-up to the original Gateways Conference held in September of 1993. The primary objective of Gateways Conference II would be to report on the findings of the Related Lands Evaluation and to learn about other initiatives aimed at protecting area resources.

It is envisioned that separate workshops would be conducted at the conference on each of the six Related Lands Evaluation topics. The workshops would provide an opportunity for the community to review and comment on the findings and to determine reasonable alternatives for addressing resource protection issues.

Park Neighbors Handbook

In collaboration with other partners, the park proposes to develop a handbook for park neighbors. The handbook would incorporate the ideas contributed at the Gateways Conference II, and would include the following information:

- The importance of protecting park values.
- Living with wildlife and ways to protect wildlife habitat.
- Landscaping.
- Identifying and managing noxious weeds.
- Wildfire mitigation.
- Site design and erosion and drainage control.
- Protecting viewsheds.
- Exterior lighting.
- Trail ethics.

The park will seek additional sponsors to fund the preparation and printing of the handbook. The park proposes to widely distribute the handbook. In addition to area landowners, the handbook will be distributed to area real estate professionals, land developers and building contractors.

Acquisition of Critical Resources

Congress has given the National Park Service the authority to acquire lands, or less than fee simple interest in lands, through two means:

Minor Boundary Revisions

Section 7(c) of the Land and Water Conservation Fund Act, as amended by Public Law 104-333 (110 Stat. 4093), provides the National Park Service with minor boundary revision authority. This authority allows the National Park Service to acquire lands through donation, purchase from a willing seller, or by exchange. Through a minor boundary revision, the park boundary can be amended to incorporate acquired lands (or interests in land) without an Act of Congress. There are specific limitations on when a minor boundary revision can be done:

- The National Park Service has obtained written consent from all property owners whose land will be included in the boundary revision.
- The total area to be added to the park cannot exceed 200 acres.
- The acquisition is not a major Federal action that would significantly affect the quality of the human environment.
- The acquisition is not a part of a larger boundary change.
- The total appraised value of the land does not exceed $750,000.
- The proposed park boundary has been subject to a public review and comment period.
- The lands must be adjacent to the park (defined as, "Lying near or close to.[9]")

For the related lands identified in this document, Rocky Mountain National Park will use a four-pronged test to determine if land (or interests in land) should be acquired under the minor boundary revision authority:

1. Does the acquisition meet all of the requirements of a minor boundary revision as stated above?
2. Does the property contain values that are important to Rocky Mountain National Park as identified by the Related Lands Evaluation?
3. Is it feasible for Rocky Mountain National Park to administer the property?
4. Have other alternatives for protecting the related values been exhausted?

If a potential acquisition does not meet all of these tests, then a minor boundary revision is not an option.

The Related Lands Evaluation has identified resources and values that are important to the mission of Rocky Mountain National Park. The maps provided with this report clearly show that some important lands do not lie adjacent to the park, but are located some distance away. Rocky Mountain National Park is vitally interested in strengthening its ability to protect these related lands. Therefore, the park will seek broader authority from Congress for minor boundary revisions in order to acquire lands that are related to the mission of the park, but which are not adjacent to the park.

In essence, the park is seeking only to amend the adjacency requirement. All of the other requirements for a minor boundary revision and the four-pronged test mentioned above must still be met. The National Park Service still would be required to obtain the related lands by donation, exchange, or purchase from a willing seller. The park will pursue this broader authority to acquire related lands only after consulting with local leaders and the park's congressional delegation.

Major Boundary Revisions

The U.S. Supreme Court recognizes that Federal land that has been dedicated for a particular purpose must be protected from activities that are inconsistent with its intended uses (*United States* v. *Brown* 552 F.2d 817 8th Cir. 1977). Major boundary revisions can be approved only by an Act of Congress. This approach can be used by the National Park Service when the requirements of a minor boundary revision cannot be met.

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[9] Black Henry Campbell, "Black's Law Dictionary - Fifth Edition." West Publishing Company, St. Paul, Minnesota. 1979.

Other entities with the ability to acquire lands, or interests in lands, can assist the park in protecting important park resources. Examples include the Estes Valley Land Trust, the Rocky Mountain National Park Associates, the Trust for Public Land, the Conservation Fund, Larimer County, etc. These organizations can acquire land and either manage it themselves, or sell or donate the lands to the National Park Service. A minor or a major boundary revision would be required if the park was to acquire such lands.
Acquiring critical lands either by donation, exchange, purchase at fair market value, or through condemnation are options that are available to the National Park Service under the direction of Congress. Given current funding constraints for land acquisition, concerns about the erosion of private property rights, and in the interest of maintaining positive community relations, **one of the main objectives of the Related Lands Evaluation is to minimize the need for Federal land acquisition**.

Other Means of Protecting Critical Resources

Protecting important resources on a parcel of land does not require fee simple acquisition. Many other options are available for protecting important resources. Some potential strategies include:

- Purchase and lease back - The park or another entity would purchase the land and lease it back to the original owner. As the owner, the park or other entity could protect important values while allowing continued use of the land.
- Conservation easements - The park or another entity would purchase the development rights for an area to be protected. This could involve all or part of a parcel of land, and the original owner would continue to own the land itself. The area covered by the conservation easement would not be developed.
- Conservation design - The basic principle behind conservation design is to identify important resources on the site and then protect those resources by clustering development elsewhere on the site. The landowner achieves the same overall development density while protecting important attributes of the site. Additional information on this topic can be found in a paper titled, "Cluster Development - An Alternative Land Use Pattern for the Estes Valley.[10]"
- Transferable Development Rights (TDRs) - Local enabling legislation is required to implement a TDR program, and "sending" and "receiving" sites must be designated. Sending sites are those with important resources to be protected. Receiving sites are less sensitive locations that can accommodate additional development density. The owner or developer of a receiving site would purchase the development rights from the sending site at fair market value. This transfer of development rights allows for the protection of important resources on the sending site while allowing the property owner to realize an economic return.

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[10] Gamble, Lawrence H., "Cluster Development - An Alternative Land Use Pattern for the Estes Valley." Rocky Mountain National Park, Estes Park, Colorado. February, 1996.

CONCLUSION

The goal of the Related Lands Evaluation is for Rocky Mountain National Park, private land owners and other interested individuals to work together to promote wise stewardship of shared natural resources and related values on the borderlands of the park. For this endeavor to achieve success, extensive partnerships and collaboration will be essential. Park staff will actively work to establish the partnerships needed to accomplish the action items identified in this document within the time indicated.

Rocky Mountain National Park
Related Lands Evaluation

Estes Valley Work Groups

Scenic Vistas

Bob Akins	Estes Park
Kathleen Bennett	Estes Park
Rich and Martha Blum	Allenspark
Margaret Clark	Estes Park
Sue Hackett	Lyons
Bill Kaufman	Loveland
Reynold Krizek	Estes Park
Bob Lord	Estes Park
Laurie Maliszewski	Estes Park
Barbara Romero	Fort Collins
Gradon Snyder	Estes Park
Phil Stern	Allenspark
Carl Waldeck	Estes Park

Wildlife Habitat

Carol Bissell	Estes Park
Jeff Carter	Westminster
Penny and Kelley Crossman	Estes Park
Madeline Framson	Estes Park
Judy Hughes	Estes Park
Harlan Lindberg	Evergreen
Burr Lloyd	Greeley
Bob Young	Estes Park

Exterior Lighting

Carol Bissell	Estes Park
Gordon Cowles	Estes Park
Ken and Robin Durr	Estes Park
Art Goodall	Estes Park
Bob Lord	Estes Park
Richard Matzke	Estes Park
Betty Streiffert	Estes Park
Ed and Mary Ellen Vejveda	Boulder
Candace Waple	Estes Park
Bud White	Estes Park

Noxious Weeds

Jane Bates	Estes Park
Carol Bissell	Estes Park
Jeff Carter	Westminister
Roxanne Coop	Estes Park
Madeline Framson	Estes Park
George and Dorothy Gibbs	Estes Park
Alice Gray	Estes Park
Enda Mills Kiley	Estes Park
Ed McKinney	Estes Park
Suzanne Miller	Estes Park
Anne Vickery	Boulder
Anne and Bob Voiland	Lakewood
Jean Weaver	Estes Park
Paul R. Yoder	Estes Park
Lynn Young	Estes Park

Trail Access

John Blakemore	Estes Park
Lou Cherbeneau	Estes Park
Madeline Framson	Estes Park
Patricia Gallagher	Allenspark
Jan Jensen	Estes Park
Jackie Johnson	Estes Park
Patti Kayne	Estes Park
Ron and Linda Nolan	Loveland
Pete Pietenpol	Boulder
Linda Richardson	Estes Park
Ken Rybkiewkz	Fort Collins
R. F. Scott	Estes Park
Rod Smythe	Boulder
Sue Spooner	Estes Park
Dick and Bettye Tumunson	Estes Park
Bill Van Horn	Estes Park
Betty Whiteside	Estes Park

Related Lands Evaluation
Public Comments on the Draft Final Report

A. GENERAL COMMENTS

1. **It is not clear what geographic area is covered by the RLE Draft Final Report.** The title of the current Draft RLE Report has been changed, and the mapping will be redone to reflect the fact that it only deals with the Estes Valley. A separate RLE Draft Report covering the borderlands of the park in the Tahosa Valley and in Boulder County will be completed by June 30, 1998. Work on a Related Lands Evaluation for Grand county will begin in July 1998.

2. **The introduction should include a statement about Estes Valley growth and the impact it will have if action is not taken now.** A Task Directive for the RLE was prepared in October of 1995. The Task Directive included an extensive discussion about settlement patterns, population growth, economics and local government. The Task Directive is available from the park and has been referenced in the RLE Final Report along with a brief statement about why action to protect important resources and values is needed now.

3. **Public involvement was generally limited to landowners within 1/2 mile of the park boundary, yet the RLE encompasses lands far beyond that distance.** The RLE Final Report has been amended to include an expanded section on public involvement. The action plan that is a part of the RLE Final Report is designed to inform all affected landowners about their relationship to the park, whether it be scenic vistas, wildfire, wildlife habitat noxious weeds, etc.

4. **Disappointed that the major environmental groups did not participate in the discussions.** The initial focus was solely on lands within 1/2 mile of the park boundary. Without the consent of neighboring landowners, we believe that the RLE would have little chance of success. The next phase will be to work with all affected landowners (see Response No. 3, above) and to widely distribute the plan. We welcome the assistance of conservation groups to help us spread the message about protecting the park.

5. **The maps are difficult to read.** The Final Report includes larger maps that are easier to read. The maps have been simplified and geographic references such as major highways, mountain peaks, and lakes have been added.

6. **Did the park visitor survey ask visitors how increased development in the Estes Valley would impact the quality of their experience?** The survey did not ask this specific question. However, 91.7 percent of respondents indicated that *natural scenery* was extremely important to their visit. Another 81.1 percent indicated that *undeveloped vistas* were extremely important. Our

interpretation of *natural scenery* and *undeveloped vistas* is that man-made intrusions need to be mitigated to the fullest possible extent.

7. **The Boulder County Parks staff could share development review information on visual impacts if Boulder County areas adjacent to the park are included in the RLE.**
   A separate Draft RLE Report is being prepared for the Tahosa Valley area in Boulder County. The expected completion date is June 30, 1998. Refer to response No. 1 above.

8. **Suggest public outreach be done sooner than September 30, 1998, in Larimer and Boulder Counties. Mountain development is occurring at such a fast rate, a lot of impacts could occur in a year.**
   We agree that there is a sense of urgency. We will address the RLE action items (including public outreach) as quickly as possible.

9. **Suggest listing specific names of homeowner associations to contact regarding the action items.**
   A local title company has furnished the park with a list of homeowner associations. We will provide information on the six RLE topics to all of the homeowner associations in the area, and will offer to make presentations on any of the topics at annual homeowner association meetings.

10. **Would existing homeowners not represented by an association who wish to renovate or redesign something only be advised through the building permit process, or can something be put into their hands earlier?**
    The action plan that is a part of the RLE Final Report is designed to inform ALL affected landowners about their relationship to the park, and to provide practical information on how homeowners can protect park resources and values. This information will be sent to owners of vacant lots as well as to owners of existing structures. We will work with the Estes Park Board of Realtors to convey information to new owners of land and/or property in the Estes Valley.

11. **The RLE Final Report could be sent to each of the agencies listed in the collaboration chart with a request for them to meet with the park as soon as possible.**
    We agree. We will furnish copies of the report to all of the entities listed in the collaboration chart along with a cover letter requesting their assistance to address the RLE topics.

12. **Protecting peace and quiet should be included as a topic in the RLE**
    Noise is a difficult topic to address because it often originates from mobile sources (vehicles, chain saws, etc.) and the annoyance generally tends to be temporary. In the case of stationary sources (like loudspeakers at camps and lodges) we will work with park neighbors to minimize the impact of noise on the park.

13. **Criteria for identifying and working with "important lands" that are not adjacent to the park can be a very sensitive issue, and there is potential for significant conflict. The development of those criteria should involve careful consideration of the rights of the landowners and a very thorough evaluation of impacts and benefits.**
We wholeheartedly agree with this comment. We believe that expansion of the park boundary and acquisition of additional lands should be actions of last resort to protect resources and values that are critical to the long-term well being of the park. Instead of expanding the park we would much rather work in collaboration with landowners on a voluntary basis to protect resources on private lands that are important to the park.

A key to successful collaboration will be for the park to clearly communicate what resources and values on private lands are important to the well-being of the park, and to provide timely and practical information on what individual landowners can do to protect those resources. The RLE is our first effort to identify what is important to the park and to outline what steps can be taken to inform area landowners.

14. **Fortunately many years ago, the wisdom of early founders saw the importance of making the "Park" a national treasure. We hope this report prompts increased awareness and evaluation to all residents and developers to keep focused on long-term benefits rather than personal short-term gains!**
Well said! Aldo Leopold, the author of *A Sand County Almanac*[1], penned these words which support this thought:

> "A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."
>
> "When we see land as a community to which we belong, we may begin to use it with love and respect."

These thoughts are a reflection of the land ethic that Leopold espoused - the notion of *obligation* to the whole, rather than focusing on the *rights* of individuals.

We believe that through the outreach efforts of the park and other land management and conservation organizations, Leopold's land ethic can be promoted and put into practice.

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[1] Leopold, Aldo. 1949. *A sand county almanac and sketches here and there.* Oxford University Press, New York, New York.

15. **Put some real action into the report and some accountability. All of your action points are simply "passive recommendations. This passive action insures that this report will go on a shelf never to be seen again. If your goal was for developers, Realtors, homeowners associations, owners, contractors, etc. to voluntarily follow the recommendations, then you are being quite unrealistic.** While we do not disagree with this comment, the park has absolutely no authority for "action" or "accountability" outside the park boundary. Given that fact, our options are limited to the following:
    1. Expand the park boundary and acquire private land to protect critical resources.
    2. Rely on other conservation organizations to protect critical resources.
    3. Work with local government to adopt regulations that will protect important resources. (**Note**: *On January 8, 1998, the park's Land Use Specialist was appointed as a technical advisor to the Estes Valley Planning Commission. In this capacity he will be directly involved in developing the new land use code for the Estes Valley.*)
    4. Appeal to the enlightened self-interest of our neighboring landowners and protect important resources through a collaborative partnership.

    The Conclusion section of the RLE reads:

    > *The goal of the Related Lands Evaluation is for Rocky Mountain National Park, private landowners and other interested individuals to work together to promote wise stewardship of shared natural resources and related values on the borderlands of the park. For this endeavor to achieve success, extensive partnerships and collaboration will be essential. Park staff will actively work to establish the partnerships needed to accomplish the action items identified in this document within the time indicated.*

16. **I just hope that implementation of the RLE will include many specific recommendations for property owners on exactly how we can help the park and preserve those natural aspects of the area that we all love.** The vision for implementing the RLE is to develop an effective outreach program that will reach as many landowners in the Estes Valley as possible. Outreach efforts will include mailings, presentations to homeowners associations and civic groups, and media coverage, among other things. In addition, we are planning to develop a brochure for each of the six RLE topics. The brochure would explain the importance to the park of the particular topic (scenery, wildlife, etc.), and would contain practical information on specific things that landowners can voluntarily do to protect park values.

B. SCENIC VISTAS

1. **Add Estes Cone to the 6 critical viewpoints. Current threat includes the proliferation of bright green metal roofs.** Estes Cone is not considered a major destination peak within the park and was not selected by the Scenic Vistas Task Force as a critical viewpoint. While we do not know how many people climb Estes Cone each year, the number will be considerably

less than the estimated 10,000 people who reach the summit of Longs Peak each year. Longs Peak and Twin Sisters are considered critical viewpoints because of the large number of visitors who reach the summits of these two peaks. Also, Estes Cone is located in the same general area of the park as Longs Peak and Twin Sisters. Estes Cone is located 3.8 miles from the summit of Longs Peak and 2.6 miles from the summit of Twin Sisters (straight line).

2. **What specific things should be done by the relevant property owners to protect views from the park?**
The next phase of the RLE will be to develop informational materials for landowners. This information will include a discussion on why it is important to protect views, why landowner assistance is needed, and specific things that landowners can do to protect views. For example, careful site planning to avoid major road cuts and fills that can remain visible for years.

3. **I replaced my roof with green metal not realizing it could reflect sunlight or create glare.**
Metal roofing is becoming more popular. It is a sound investment since it has a long life and requires little maintenance. Also, metal roofs are much safer in our wildfire prone environment. We learned from a manufacturer that the finish on a metal roof will weather and lose some of its shine as time goes on.

4. **Homeowner Association needs advice on revegetating a steep slope in order to reduce visual impact of a road scar.**
Revegetation with our climate and thin soils is not an easy task. Therefore, the first imperative is to minimize road cuts and fills to begin with. Where they are unavoidable, good information is needed on how to revegetate these disturbed sites. The park will explore the possibility of developing an informational brochure/video on this subject in partnership with other land management entities.

C. WILDLIFE HABITAT & WETLANDS

1. **The wetland data was based on aerial photography that was done in the 1980's. Can't more up to date information be used instead?**
Unfortunately, a comprehensive wetlands inventory has not been done for the Estes Valley. We used the only available information, which is the National Wetlands Inventory of the U.S. Fish and Wildlife Service and vegetation mapping that was completed in 1997 using aerial photography from 1980.

Larimer County recently adopted a new Larimer County Master Plan that includes the following policies:

> **ER-3-s2** . . . *County staff and the landowner will work together on a case-by-case basis to identify and prioritize those other wetlands that do not appear on the Wetland Map due to scale and size limitations, and in areas not yet inventoried.*

> **ER-3-s3** *A Wetland Mitigation Plan shall be developed for any development project which impacts a wetland. Requirements and performance standards for the mitigation plan shall be clearly established in the Land Use Code, and shall be the basis for approval of that plan.*

As the land use code is developed for the Estes Valley, park staff will seek to have similar language added to that document as well.

2. **Map riparian areas by using flood plain elevation levels rather than by arbitrary distance.**
   Flood prone areas do not always qualify as wetlands. Until a comprehensive inventory can be done and protective measures adopted, wetland protection must rely on local development codes (see previous response).

3. **A beaver is pictured in the RLE report but is not mentioned in the text. While the RLE concentrated on wildlife habitat for the three species that garner the most attention from park visitors, we regret the omission of beaver. The loss in 1997 of several of the ponds and Beaver Ponds has emphatically drawn our attention to the long-term decline of beaver in the park and in surrounding areas.**
   We share the concern about the decline in the beaver population. Unfortunately, little research has been done to determine the exact cause of the declining population. This year, for the first time, the National Park Service will have an experienced volunteer who will begin to address this issue. In addition to conducting research, the volunteer will be looking for grants and other funding sources to establish an ongoing research program.

   We regret that other species besides elk, mule deer and bighorn sheep could not be covered in the RLE. Lack of current information was one reason, and producing a meaningful report in a timely manner was another reason why other species were not included in the report.

4. **Please address the relationships of resident human and wildlife populations in and on the borders of the park in relation to visitor satisfaction, and to natural resource conservation. Species other than herbivores need therefore to be prominently included under the topic of wildlife.**
   An additional action item has been added to the wildlife section of the RLE to address this comment. The action item calls for informing all landowners in the Estes Valley about habitat conservation, the importance of not feeding and attracting wildlife, and how to coexist with the numerous wildlife species in this area (Please refer to Item C.5, below).

5. **I am concerned that you will only be working with landowners that have five acres or more of undeveloped land. Particularly in relation to protecting wetlands, everyone should be informed.**
The following action item has been added to the Wildlife Habitat section of the RLE Final Report:

> *By September 30, 1998, all landowners located within the Estes Valley will be informed about the importance of habitat and wetlands conservation, the importance of not feeding wildlife, and how to coexist with the wildlife species in this area.*

D. WILDFIRE

1. **Suggest adding Wildland Fire Cooperators and the University of Northern Colorado to the Collaboration Chart in Appendix A.**
The Wildland Fire Cooperators in Larimer and Boulder Counties is already a part of the Collaboration Chart. The University of Northern Colorado is considered an "affected landowner," and is therefore also included in the chart even though it is not specifically listed.

2. **Concerned about beetle killed trees in the park near Eagle Cliff as a potential fire threat to private property.**
The park is planning to mitigate wildfire hazards in this particular area within the next year. Work to be done may include thinning of trees and removal of dead and downed trees.

3. **The best forum for working with local officials and the public regarding wildfire issues is the Northern Front Range Wildland Fire Cooperators.**
We agree. The park will coordinate all efforts on wildfire education and the development of wildfire mitigation regulations with the Northern Front Range Wildland Fire Cooperators. The Collaboration Chart found in Appendix "A" has been corrected to include the proper title for the Wildland Fire Cooperators. A park staff member is on the Board of Directors of the Cooperators.

4. **Landowners need a way to dispose of slash. Create a chipper or haul away program.**
Rocky Mountain National Park does not have the authority to coordinate such a program on private lands outside the park boundary. We will explore this subject with the Northern Front Range Wildland Fire Cooperators.

5. **What specific steps should I take (and persuade my neighbors to take) to minimize the chance for wildfire starting here?**
The Colorado State Forest Service (CSFS) has some excellent publications on wildfire hazard mitigation. The most comprehensive is Wildfire Protection in the Wildland Urban Interface (CSFS #143-691). They can be reached at (970) 491-6303 in Fort Collins. Rocky Mountain National Park will be working with the Northern

Front Range Wildland Fire Cooperators to design an outreach program that will target area landowners who are located in areas with a high wildfire potential.

6. **You say that tree thinning and fuel reduction will take place in areas where the threat is greatest. Are these treatment areas in areas that are, or are to be, designated as wilderness? And if so, are the treatment activities consistent with wilderness?**
The park is planning to undertake fuels reduction for a short distance inside the park boundary (50± feet). This will occur in areas that are proposed wilderness. We believe that fuels reduction in these areas is appropriate because of decades of fire suppression, and the proximity of these areas to residential development. Fuels reduction along the park boundary will enhance the park's ability to allow natural fire processes to occur on the interior of the park.

7. **More fire danger information should be given to new landowners.**
We agree. One of the target groups for an outreach program on wildfire will be the Estes Park Board of Realtors. We would like to develop a packet of information on the six Related Lands Evaluation topics, which includes wildfire, that can be given to existing as well as new landowners in the area.

E. NOXIOUS WEEDS

1. **How can I get professional help to determine if any noxious plants are on my property? What specific steps can I take to eradicate them without harming native plants?**
A number of local partners were successful in securing funding for weed management activities in the Estes Valley for the summer of 1998. The State of Colorado, the National Fish and Wildlife Foundation and several homeowner associations and other partners contributed over $40,000 toward this effort. The funds will be used to hire a licensed contractor who will map the location of noxious weeds and eradicate them.

   Several neighborhoods in the Estes Valley will be surveyed for noxious weeds during the summer of 1998. In addition, the park will be working with other partners to develop useful information to assist landowners with noxious weed identification and control.

2. **There was no information about weed control programs inside the park that might impact weed control outside.**
Rocky Mountain National Park is currently managing 13 noxious weeds that have been found within the park: Bull thistle, Canada thistle, musk thistle, diffuse knapweed, spotted knapweed, dalmatian toadflax, yellow toadflax, leafy spurge, perennial pepperweed, field bindweed, common burdock, houndstongue, and woolly mullein. Management includes mapping the location of noxious weeds, hand pulling and herbicide spraying on some species. No use of biological controls (i.e., insects) is currently planned. Over the course of the next three years, Rocky Mountain National Park will expend $37,000 for noxious weed management within its borders.

F. NIGHT LIGHTING

1. **The conclusion that it was not necessary to map night lighting was a surprising dismissal.**
   Exterior lighting is ubiquitous - everybody has it! Therefore, one of the action items under Night Lighting in the RLE is to provide ALL landowners in the Estes and Tahosa Valleys with information about the threat of excessive night lighting on the nighttime sky and the principles of good night lighting. Given that all landowners in the area are (or will be) involved, we did not believe it was necessary to map existing light fixtures.

2. **Mapping was only done in campgrounds, but what about mapping those areas with exterior lights within 1/2 mile of the park boundary?**
   See previous response.

3. **Who will notify landowners by 9/30/98 about night lighting?**
   The plan is to make this a collaborative effort between the park, various homeowners associations, and other interested entities.

4. **It would behoove the park to develop a more proactive program for replacing outdated fixtures that contribute to light pollution of the night sky.**
   The park has developed a preliminary exterior lighting plan for the utility and housing area located near park headquarters. In addition, plans are being prepared to remodel the park headquarters building. The headquarters remodeling project will include new lighting for the exterior of the building and the parking lot. It is anticipated that funding for these two projects will be obtained within the next five years.

   The park is developing a "palette" of appropriate light fixtures to use in different situations. As outdated light fixtures are replaced, the new fixtures will be chosen from this "palette" of approved fixtures. We have a long way to go, but the park must lead by example as a first step in developing an effective night lighting campaign.

5. **You mention that the park will be taking "before" and "after" photographs of the exterior light fixtures in the park as they are replaced. In addition, is there a way to measure the difference in the amount of light emitted?**
   Good idea! Arrangements are being made to use an illuminence meter to take light measurements before the old light fixtures are replaced and again when the new light fixtures have been installed. A comparison of the light output can be displayed using a line graph.

G. TRAIL ACCESS

1. **How are pedestrian visitors to get to the park on foot? A trail from downtown Estes to the Deer Ridge Trail, including a spur to the Visitors Center, would surely be welcome.**
   There are two projects in the works that could enhance pedestrian access to the park from downtown Estes Park. The first is a proposal to widen Moraine Avenue (U.S.

36) from downtown Estes Park to Marys Lake Road to accommodate pedestrian and bicycle lanes in both directions. The Regional Transportation Plan has this project scheduled for sometime between 2007 and 2015.

The second is an ongoing effort by the Estes Valley Trails Committee to protect and enhance trail access throughout the Estes and Tahosa Valleys. The Committee meets monthly and is under the auspices of the Estes Valley Recreation and Park District. This would be a good place to start to explore possibilities for new trail connections.

2. **We believe that now is the time to close off the short section of park trail that exits the southeast end of Deer Ridge onto private land and restore the area.** One of the desired outcomes for trails as stated in the RLE is:

   > *Essential trails that provide access to the park via private lands will remain open for public use. Essential trails are those where no other reasonable alternative for access currently exists.*

   In the case of the trail mentioned above, a reasonable alternative for access may currently exist, but has not been secured. The Estes Valley Trails Committee, the Town of Estes Park, and Larimer County have been made aware of this situation. Because the alternative trail lies outside of the boundary of Rocky Mountain National Park, these other entities will need to take the lead in securing the alternate route. When this has been accomplished, the other route across private property can be closed off. In the meantime, the park will not promote the use of this existing trail where it crosses private land.

3. **Are there any current concerns/problems regarding inappropriate or illegal use of trails (bicycles, all terrain vehicles, etc.) that originate from a point where there are no restrictions outside of the park and then move into the park?** This is not a major issue at this time. Most of the trails that enter the park from adjacent private properties have signs that explain the prohibition on bikes, dogs, motorized vehicles, etc.

G. PROTECTING IMPORTANT RESOURCES

1. **Legal protection alone (no matter by what method) is NOT enough to ensure "protecting important resources." Legal and biological protection must go hand-in-hand, and funding for current and future stewardship/management must be incorporated into the initial fundraising and legal financial planning (i.e., for a stewardship endowment).** We agree. This comment will be passed along to the Estes Valley Land Trust, Larimer County Open Lands Advisory Board and other land conservation organizations.

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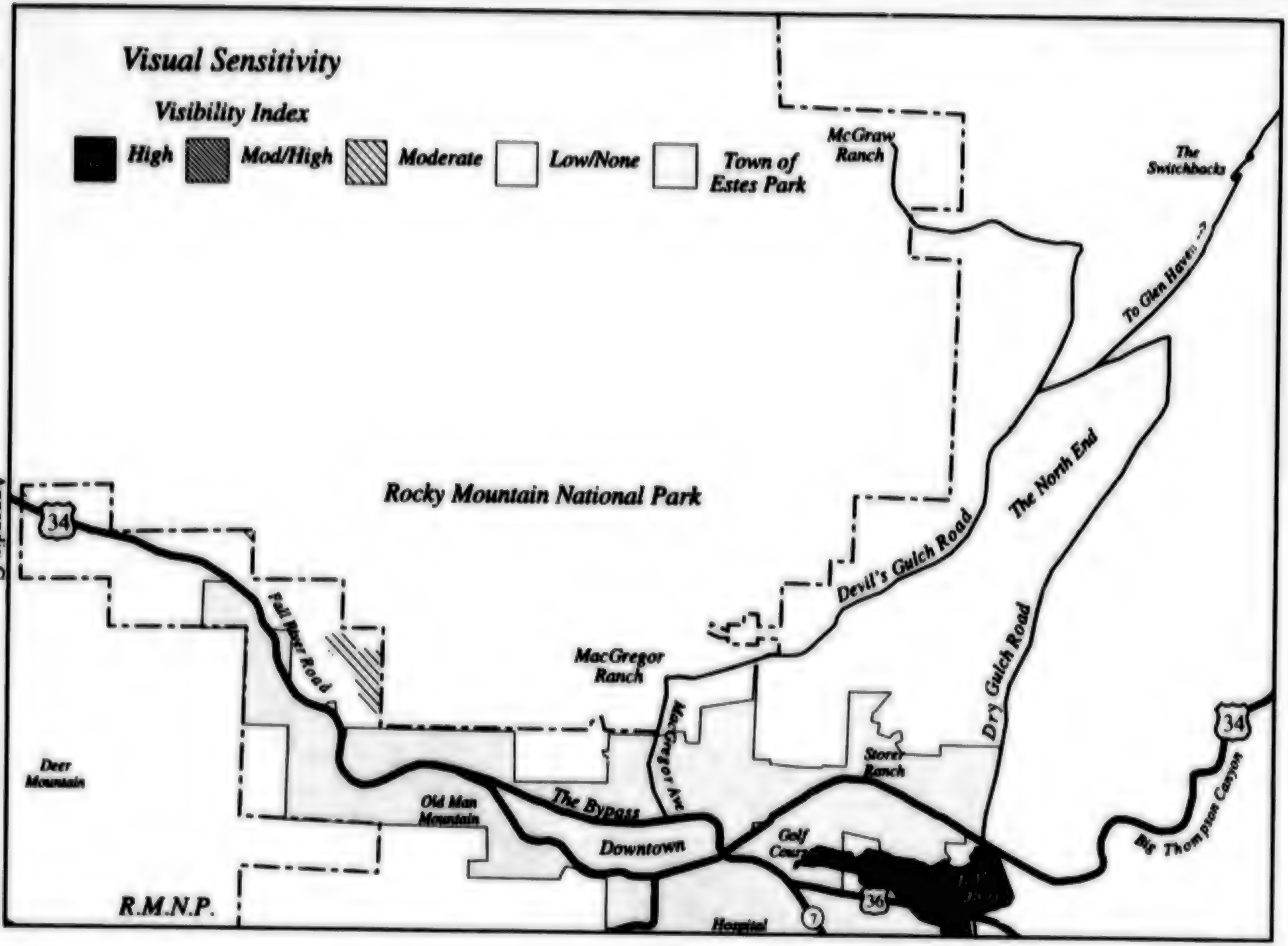
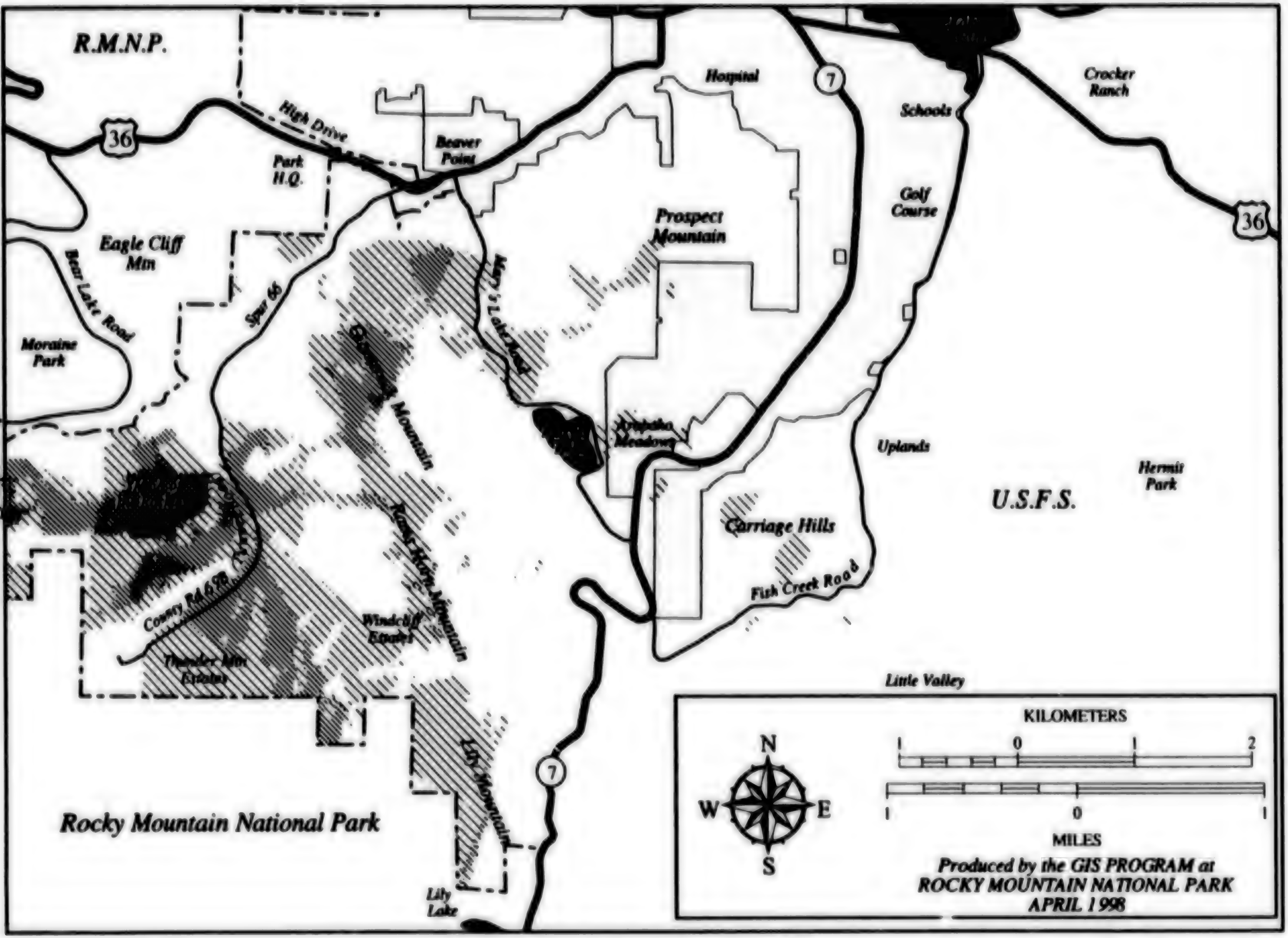


Visual Sensitivity


R.M.N.P.
36
High Drive
Park H.Q.
Beaver Point
Hospital
7
Schools
Crocker Ranch
Golf Course
36
Prospect Mountain
Eagle Cliff Mtn
Bear Lake Road
Spur 66
Mary's Lake Road
Moraine Park
Mountain
Arapaho Meadows
Uplands
Hermit Park
U.S.F.S.
Carriage Hills
Fish Creek Road
County Rd 67B
Windcliff Estates
Thunder Mtn Estates
Mountain
Little Valley
Lily Mountain
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Rocky Mountain National Park
Lily Lake
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MILES
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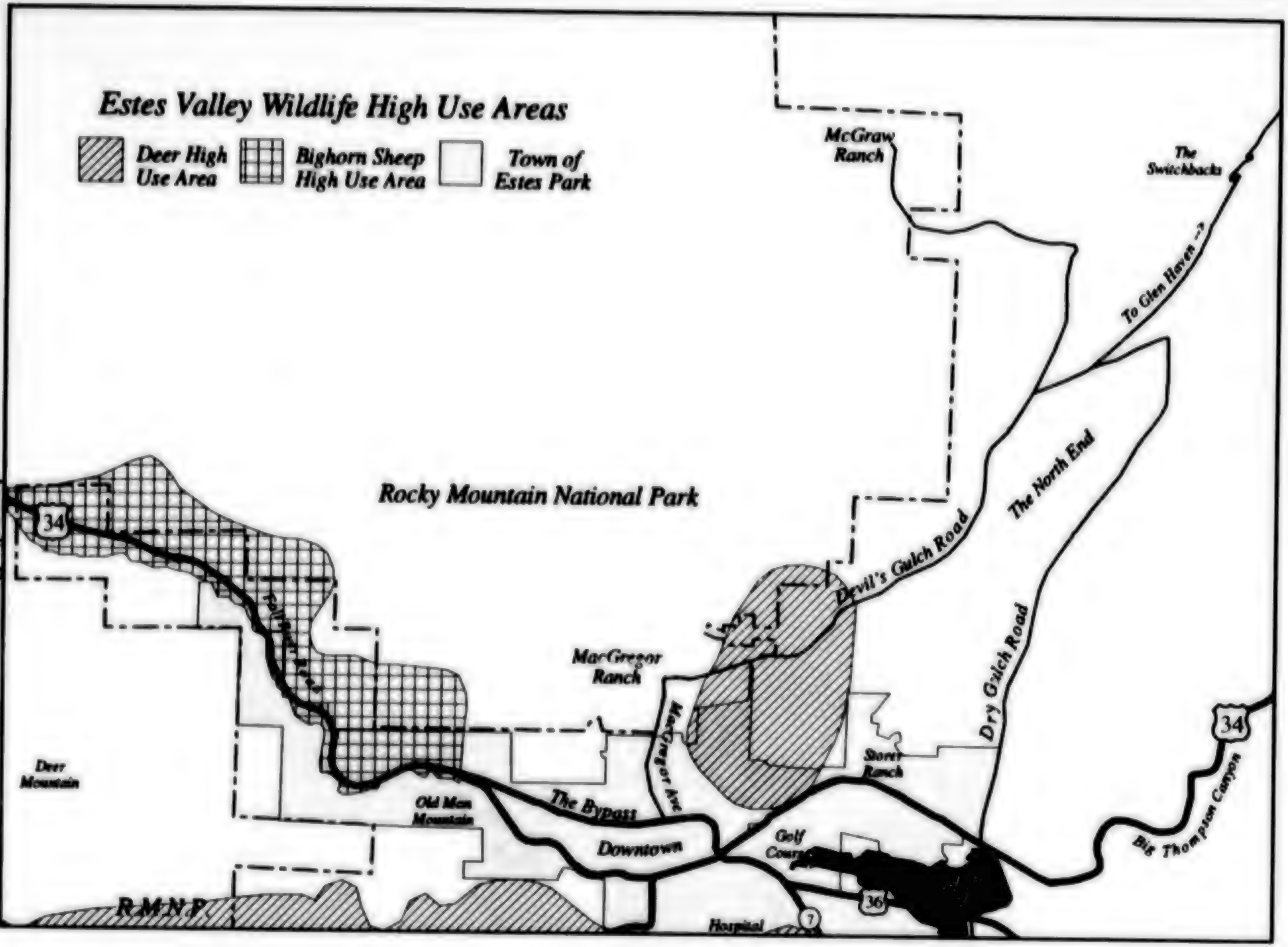
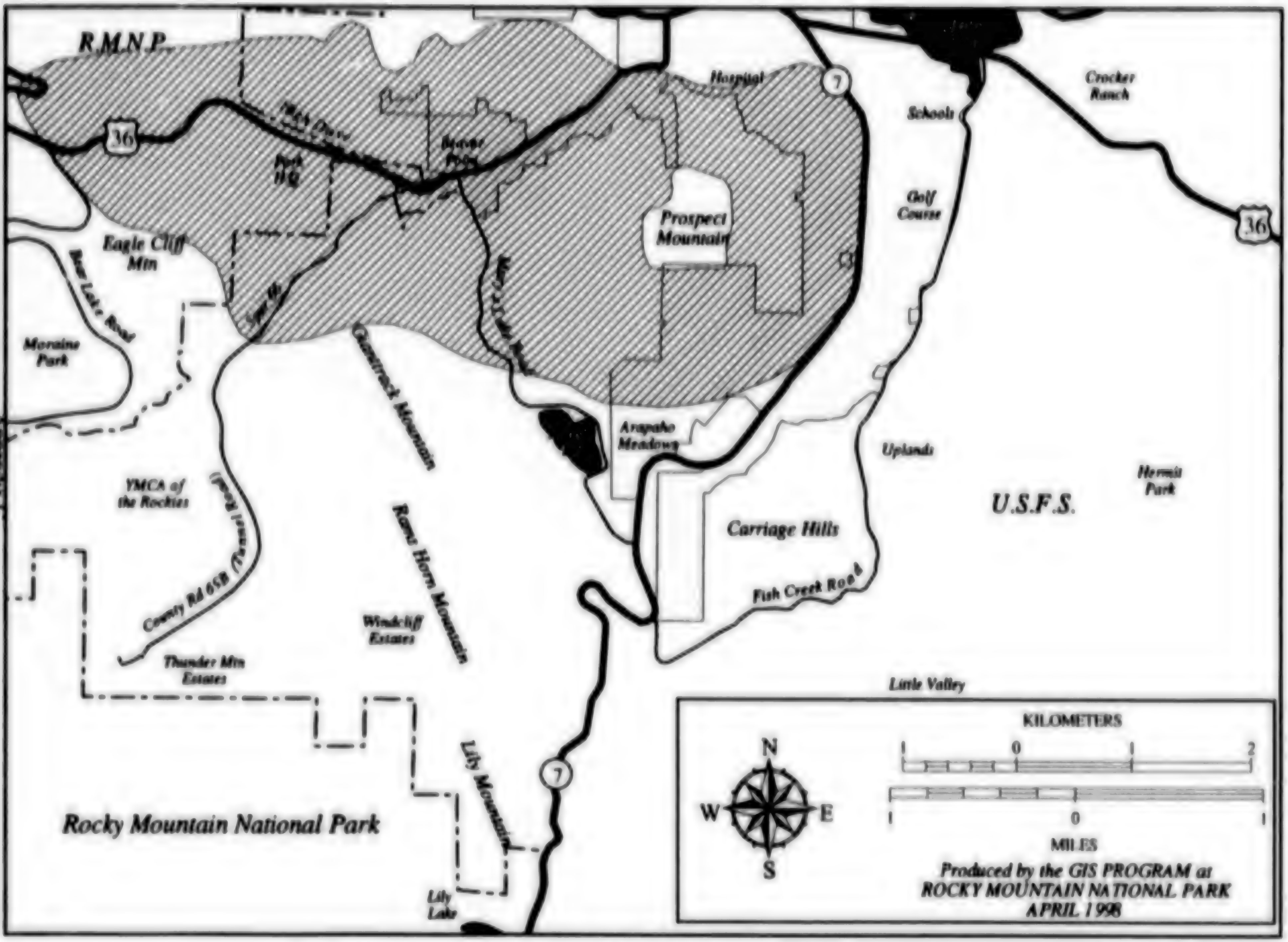
Map 1 35


Estes Valley Wildlife High Use Areas
▨ Deer High Use Area
▦ Bighorn Sheep High Use Area
☐ Town of Estes Park
McGraw Ranch
The Switchbacks
To Glen Haven →
The North End
Rocky Mountain National Park
Devil's Gulch Road
Dry Gulch Road
34
Fall River Rd
MacGregor Ranch
MacGregor Ave
Stanley Ranch
34
Big Thompson Canyon
Deer Mountain
Old Man Mountain
The Bypass
Downtown
Golf Course
36
7
Hospital
R.M.N.P.



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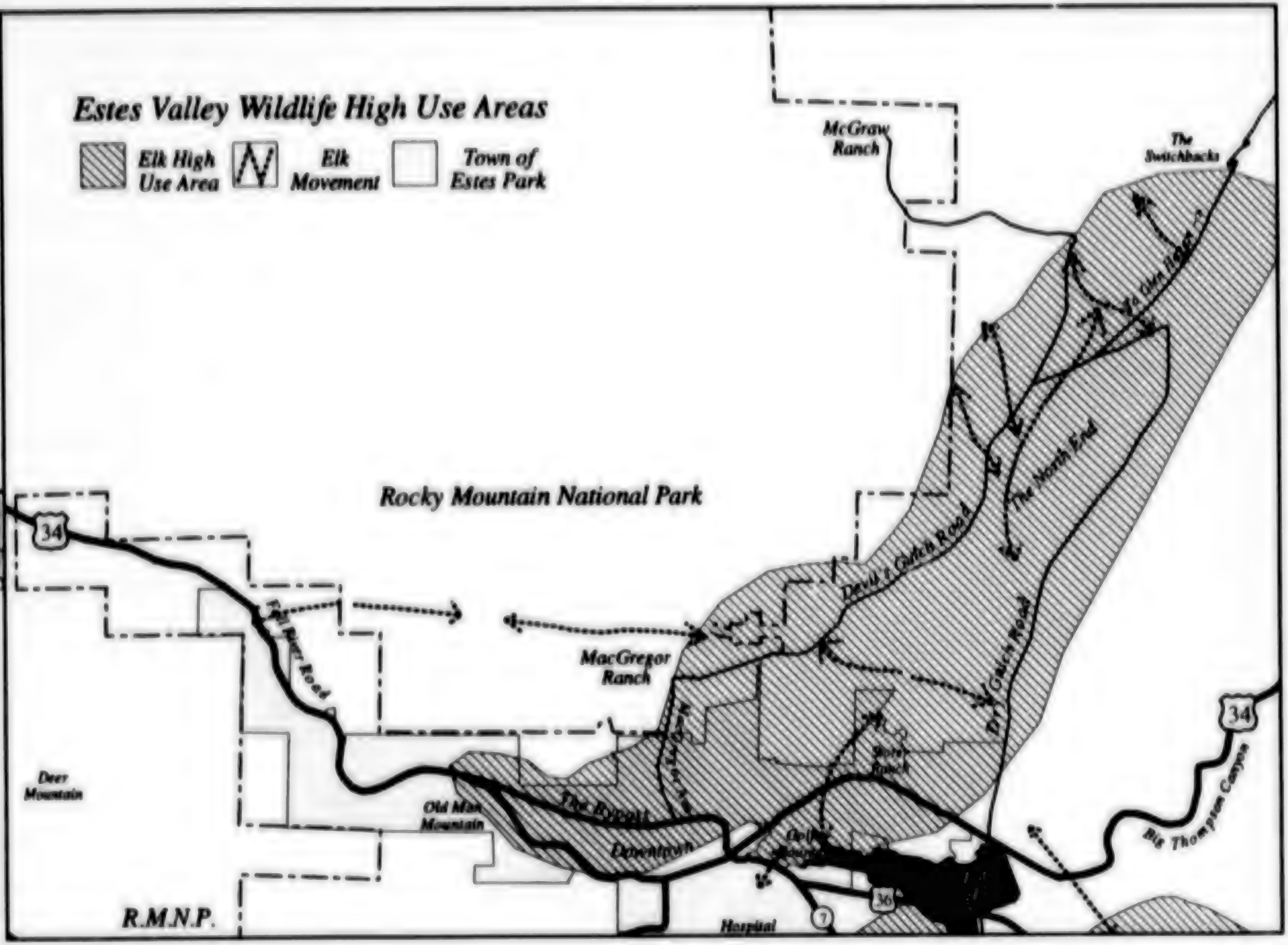
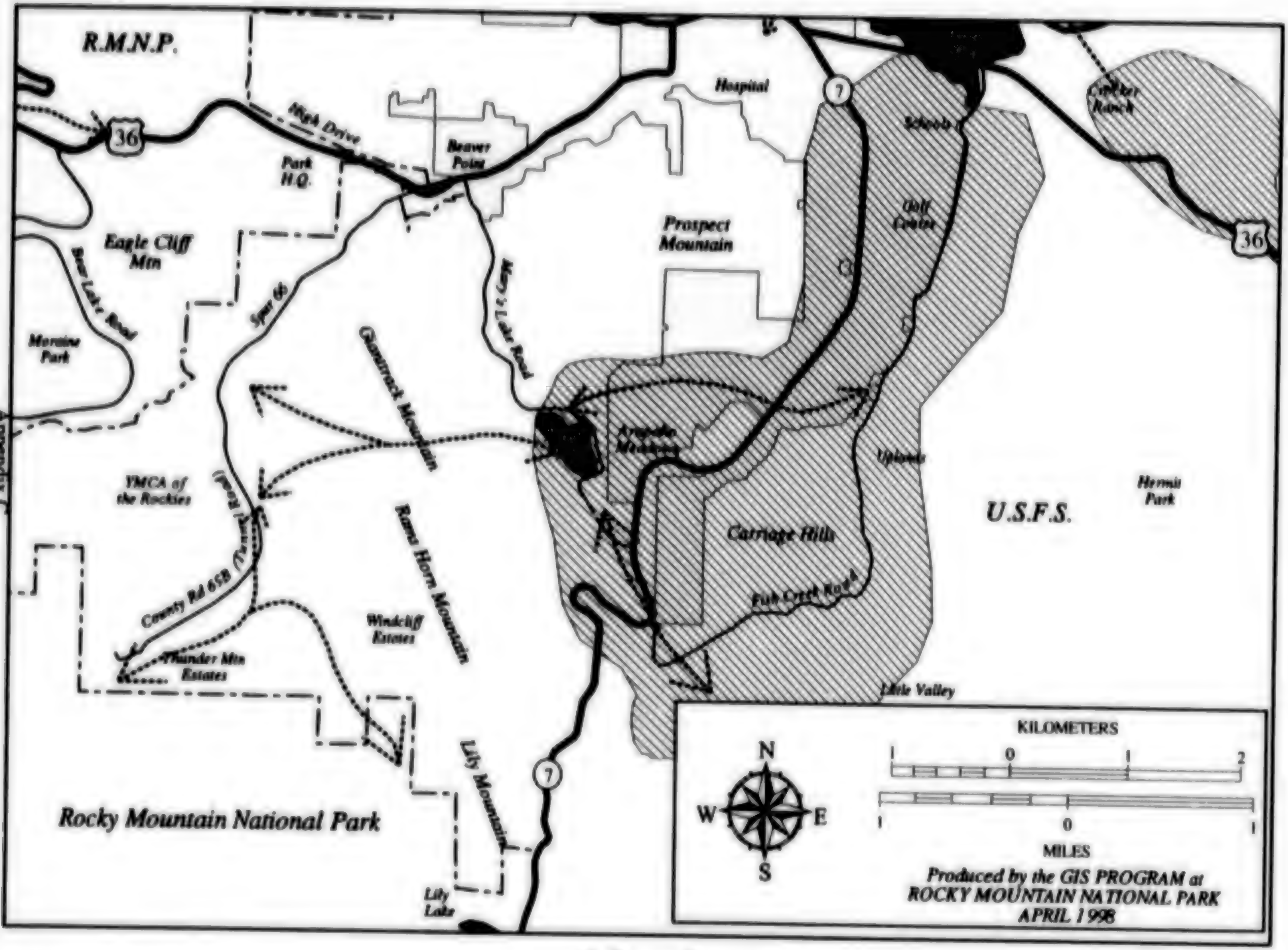
Map 2

37



Estes Valley Wildlife High Use Areas



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Map 3

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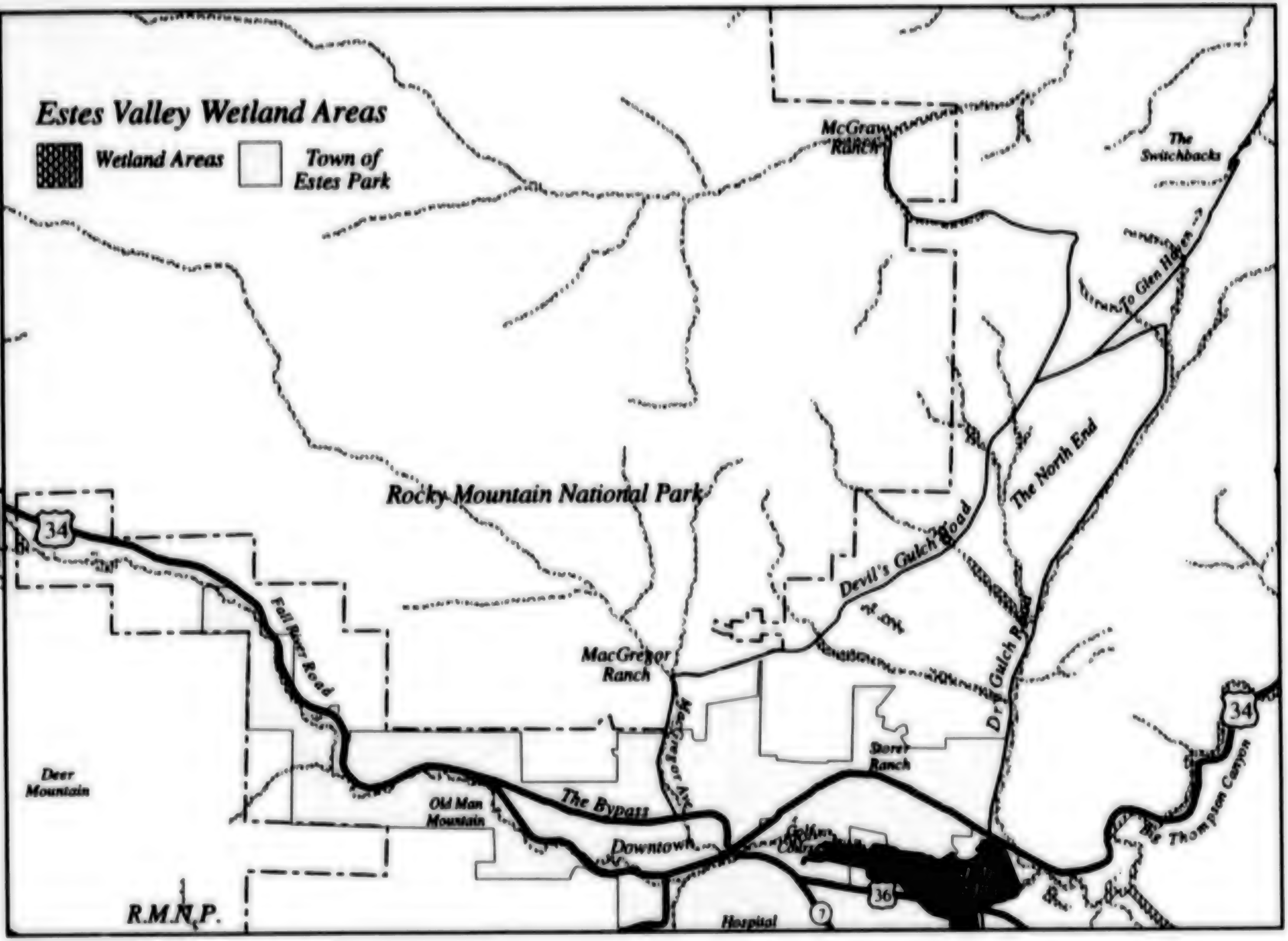
Estes Valley Wetland Areas
Wetland Areas
Town of Estes Park
McGraw Ranch
The Switchbacks
To Glen Haven
Rocky Mountain National Park
The North End
Devil's Gulch Road
MacGregor Ranch
Dry Gulch Road
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The Bypass
Downtown
Golf Course
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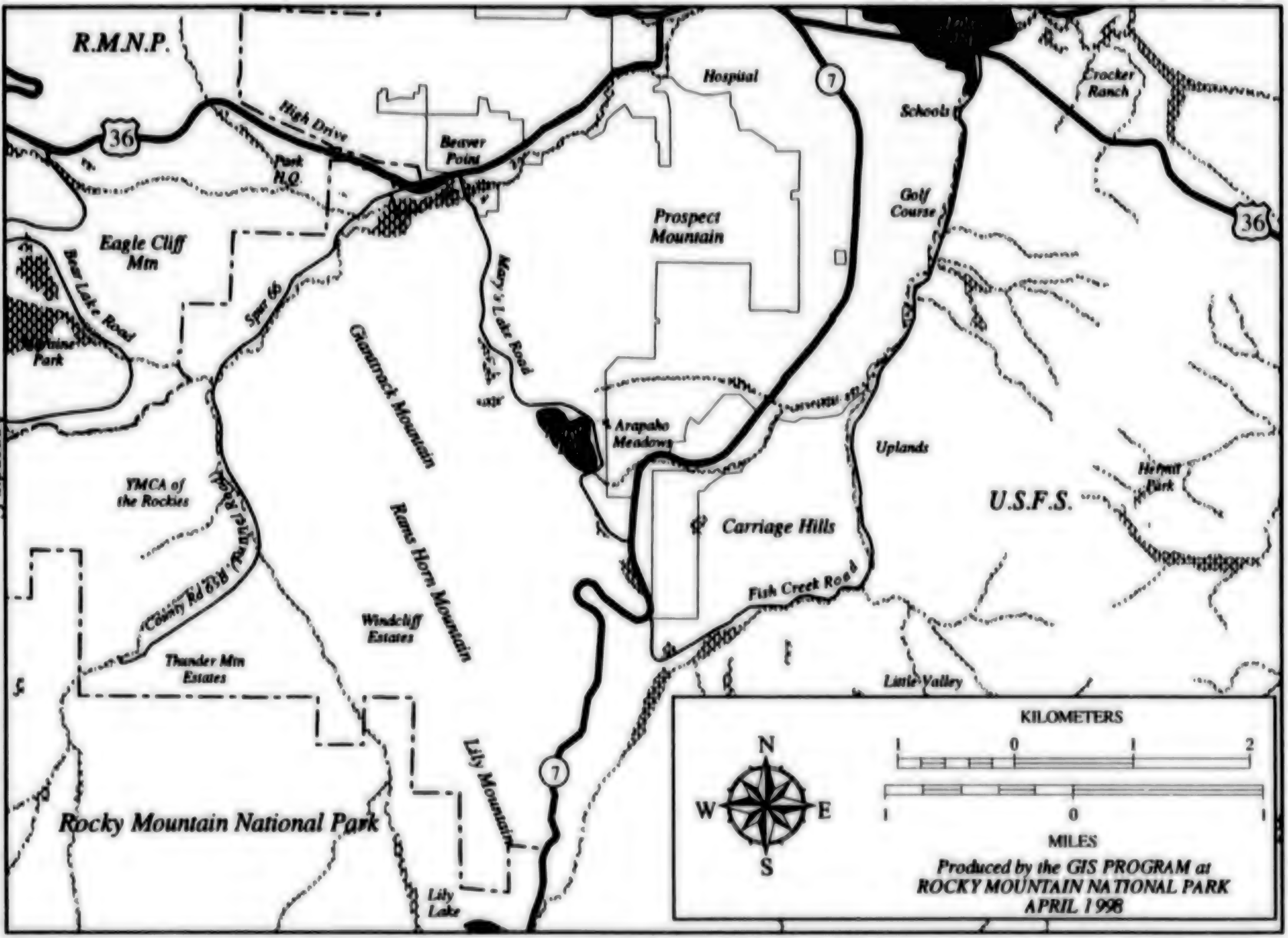
Hospital
Big Thompson Canyon
R.M.N.P.



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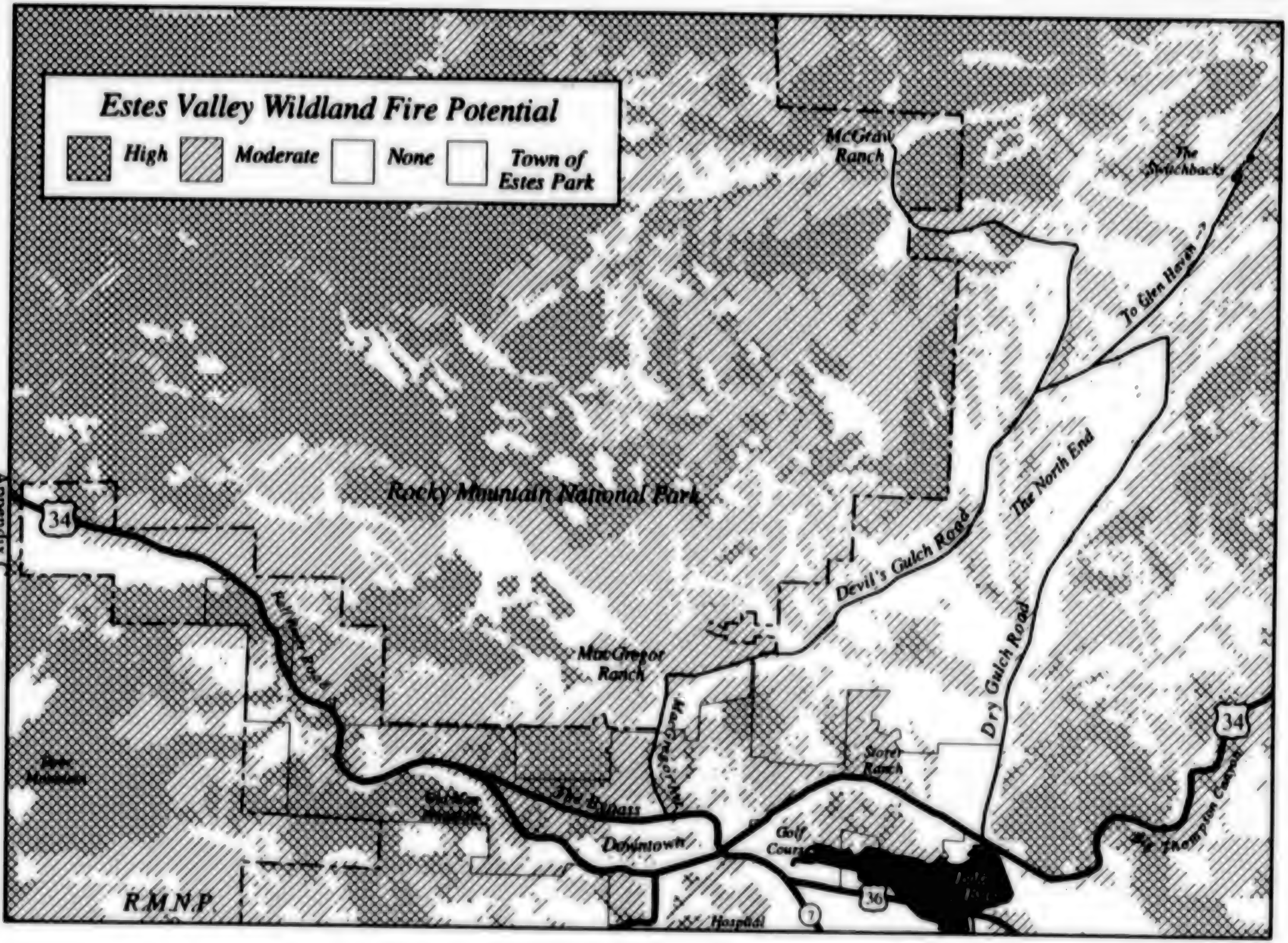
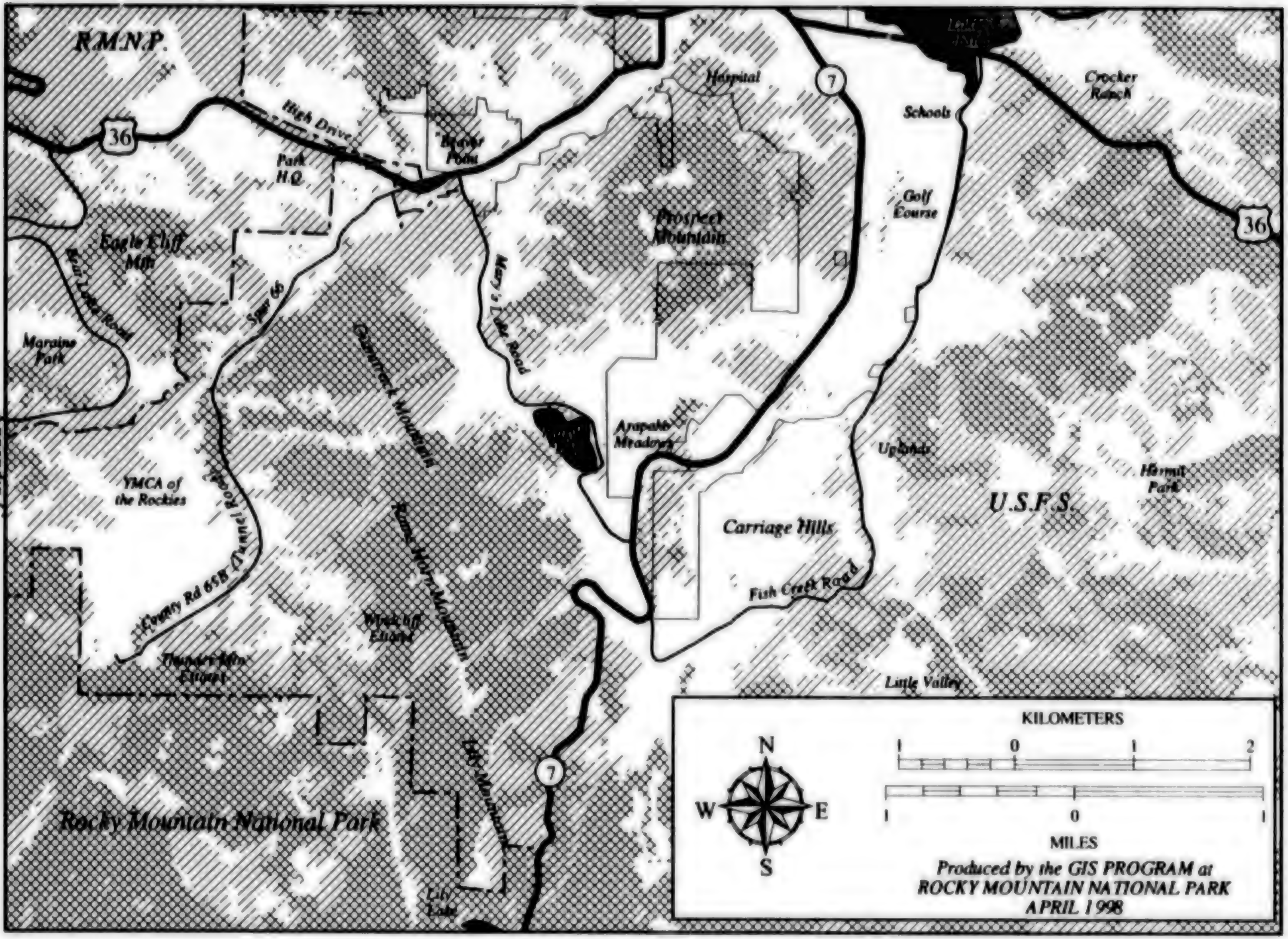
Map 4


Estes Valley Wildland Fire Potential
▩ High
▨ Moderate
☐ None
☐ Town of Estes Park
McGraw Ranch
The Switchbacks
To Glen Haven
The North End
Devil's Gulch Road
Dry Gulch Road
Rocky Mountain National Park
MacGregor Ranch
MacGregor Ave.
34
Fall River Road
The Bypass
Downtown
Deer Mountain
Old Man Mountain
Stanley Ranch
Golf Course
Lake Estes
36
7
Hospital
34
Big Thompson Canyon
R.M.N.P.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Beaver Point
Hospital
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Schools
Crocker Ranch
Golf Course
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Prospect Mountain
Eagle Cliff Mtn
Bear Lake Road
Spur 66
Moraine Park
Mary's Lake Road
Giant Track Mountain
Arapaho Meadows
Uplands
Hermit Park
YMCA of the Rockies
U.S.F.S.
Carriage Hills
County Rd 65B (Tunnel Road)
Rams Horn Mountain
Fish Creek Road
Windcliff Estates
Thunder Mtn Estates
Little Valley
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Lily Mountain
Rocky Mountain National Park
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MILES
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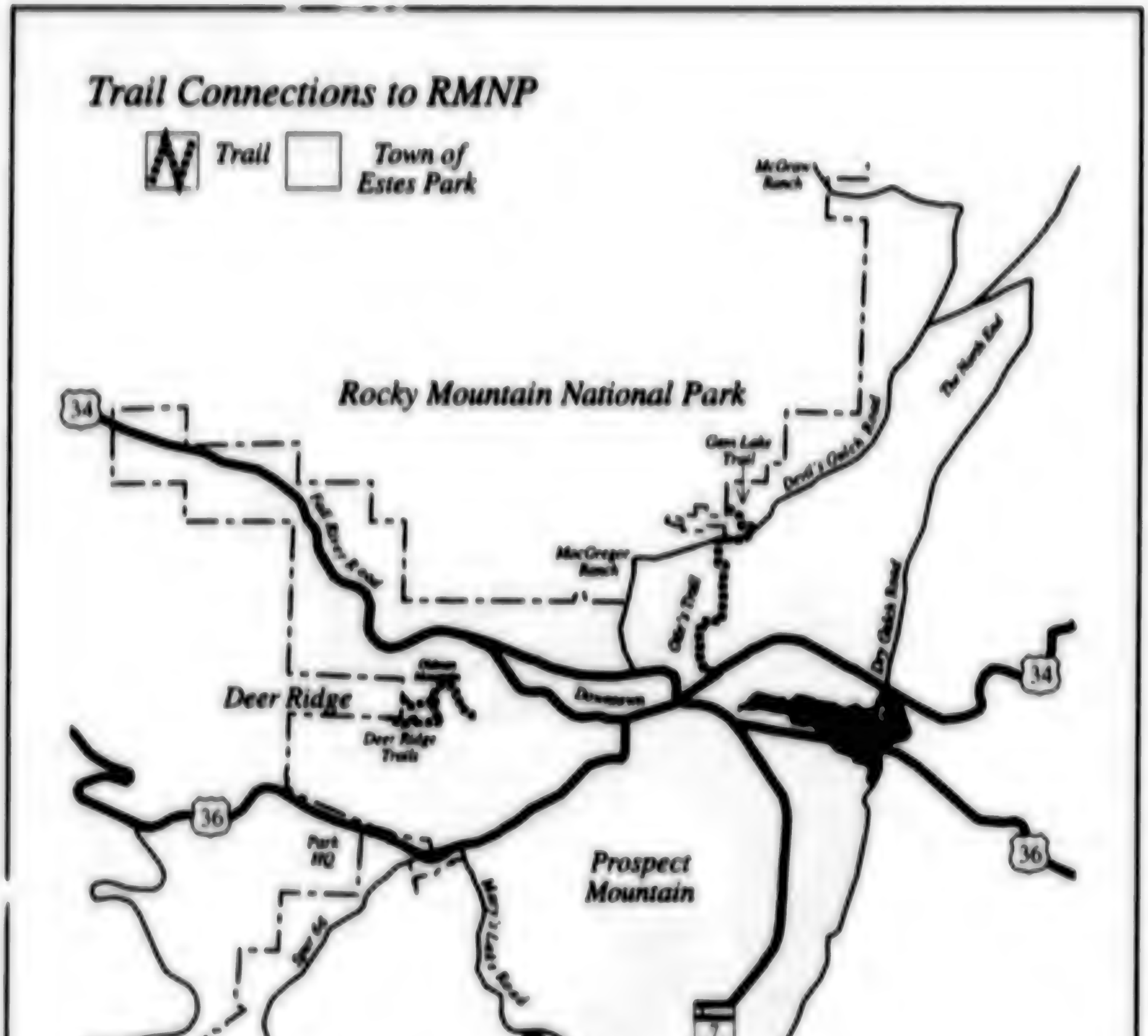
Map 5

43



Map 6

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COLLABORATION CHART
Related Lands Evaluation - Estes Valley
Rocky Mountain National Park

	SCENIC VISTAS	WILDLIFE HABITAT	WILDFIRE MITIGATION	NOXIOUS WEEDS	NIGHT LIGHTING	TRAIL ACCESS
AFFECTED LANDOWNERS (As shown on the map for each topic)	●	●	●	●	●	●
BOULDER COUNTY	●	●	●	●	●	●
BUREAU OF RECLAMATION			●	●	●	●
COLORADO DIVISION OF WILDLIFE		●		●		
COLORADO DEPARTMENT OF TRANSPORTATION				●		
COLORADO MOUNTAIN CLUB						●
COLORADO STATE FOREST SERVICE			●			
COLORADO STATE UNIVERSITY COOPERATIVE EXTENSION			●	●		
ESTES PARK BOARD OF REALTORS	●	●	●	●	●	●
ESTES VALLEY CONTRACTOR'S ASSOCIATION	●		●	●	●	
ESTES VALLEY COUNCIL (Representing area homeowner associations)	●	●	●	●	●	
ESTES VALLEY LAND TRUST	●	●	●	●		●
ESTES VALLEY RECREATION AND PARK DISTRICT			●	●	●	●
HOMEOWNER ASSOCIATIONS THROUGHOUT THE AREA	●	●	●	●	●	●
INSURANCE AGENTS THAT PROVIDE HOMEOWNER'S INSURANCE			●			
LANDSCAPING PROFESSIONALS, SUPPLIERS AND NURSERIES				●		
LARIMER COUNTY	●	●	●	●	●	●
LIGHTING SUPPLIERS					●	
LODGES, CAMPS AND RETREATS THAT BORDER R.M.N.P.	●	●	●	●	●	●
NORTHERN FRONT RANGE WILDLAND FIRE COOPERATORS			●			
PROFESSIONAL ARCHITECTS, CIVIL ENGINEERS, ETC.	●	●	●	●	●	●
ROCKY MOUNTAIN NATIONAL PARK	●	●	●	●	●	●
TRAIL RIDGE RIDERS HORSE CLUB				●		●
TOWN OF ESTES PARK	●	●	●	●	●	●
U.S. FOREST SERVICE	●	●	●	●		●
UTILITY COMPANIES (Public Service Company, U. S. West, etc.)				●		

END

01-22-99